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AUTHOR West, Edith; And Others
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ABSTRACT

Seven background papers, along with the discipline papers described in SO 003 100, provided significant ideas, concepts, and important topics for organization and development of the project social studies curriculum. The seven papers are: 1) "Developing Skills in the Social Studies Program", which discusses objectives of teaching skills and behavioral goals related to skills; 2) "The Role of the Social Studies in Developing Values"; 3) "Concepts, Generalizations, and Theories"; 4) "Learning Principles", which suggest factors associated with the learning process; 5) "The Social Science Disciplines", which places the discipline papers into the perspective of the social sciences as a broad division of study; 6) "Curricular Framework", which outlines and summarizes k-12 units of Project Social Studies; and 7) "Implications for Terminology", which offers a framework for examining terminology in the social sciences. (SJM)

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[PROJECT SOCIAL STUDIES. BACKGROUND PAPERS]

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PROJECT SOCIAL STUDIES
UNIVERSITY OF MINNESOTA

Background Paper

DEVELOPING SKILLS IN THE SOCIAL STUDIES PROGRAM

Edith West

Developing skills is one of the major goals of the social studies program. Skills are important both because they are essential to gaining knowledge in the social sciences and because they are needed by citizens in a democracy. Unless students can read social studies materials or gain information by listening, they will be unable to learn much in social studies classes. Nor will they be able to gain information needed later as citizens. Pupils need to be able to exercise their rights as citizens in a democracy. Knowing how to locate and gather information is important to achievement in social studies. These skills are also important to citizens who try to follow world affairs or the ramifications of many domestic issues. Being able to evaluate sources of information is crucial as pupils attempt to draw conclusions about social science topics. It is also crucial to the citizen who attempts to weigh issues and candidates. These are but a few of the skills which are important both for achievement in social studies classes and for the citizen in a democracy.

Social studies teachers have differing degrees of responsibility for developing the skills outlined as objectives in this paper. Some skills, such as communication skills, are taught primarily in other classes. Social studies teachers must reinforce the teaching of these skills and must teach specific aspects of them. For example, the social studies teacher needs to help pupils learn to read the specialized vocabularly of the social sciences, to locate materials in specialized reference works on the social sciences, to gain information through observational techniques appropriate to social science research, or to apply logical analysis to social studies materials.

Other skills are an inherent part of the social sciences and are the prime responsibility of the social studies teacher. Map reading and skills related to a time sense fall into this classification. Although some aspects of evaluating sources of information may be taught in other classes, this skill is so important in the social sciences that it, too, is a major responsibility of the social studies program. In the list of skills which follows, those aspects of skills which seem peculiarly a part of the social studies program are marked with an asterick.

Although skills are listed in general terms in this paper, it is relatively easy to identify specific skills related to the methods of inquiry in the different social sciences. For example, checking on the bias and competency of witnesses is an aspect of historical criticism. Skills related to a time sense are also related to the historical method. Map reading skills are part and parcel of the method of inquiry in geography. Behavioral scientists must use various skills related to attacking problems (e.g. identifying values involved in an issue, using analytical concepts from field, establishing and refining hypotheses, etc.) They must use specialized sources of information such as the census volumes. They must develop special techniques for gathering information such as sampling techniques, interviews, questionnaire surveys, and indexes. They must learn to use statistical devices for analyzing information.[1]

The purpose of the social studies program is not to develop social scientists, although hopefully a number of students will enter social science fields. Rather the purpose of having pupils study the methods of inquiry in the social studies program is to develop good consumers of social science information and respect for the social sciences. Frequently, the more able student is attracted to the natural sciences because of their realism and hard headedness. They may consider the social sciences as mere collections of other people's opinions. Pupils who study the careful methods of inquiry used by social scientists should develop greater respect for the social sciences.

On the other hand, many pupils in schools today have been told what to think most of their school lives. They have been asked to accept ideas in textbooks or the ideas of teachers as the truth. By engaging in the methods used by social scientists, pupils should learn the strengths and shortcomings of different techniques and of the social sciences as a whole. They should, for example, learn to evaluate sources of information, not to accept the printed or oral word as the gospel truth even when it comes from such "authorities" as teachers or textbook authors. They should learn the limitations of correlational studies and the habit of checking on sampling techniques before deciding whether or not to accept the conclusions of any research study. They should develop a better idea of the tentativeness of generalizations, and they should learn to look for evidence to challenge their hypotheses, not just to support pet theories. In short, if teachers help pupils relate skills to methods of social science inquiry and if they give pupils opportunities to become fledgling social scientists, they should help pupils develop many of the scholarly values listed in the Project Social Studies Discipline Paper on Values.[2]

Subject matter content, skills, and values are interrelated, even though for purposes of clarification they are listed separately as goals of the social studies program. That it is impossible to separate them completely can be seen by examining the skills related to a time sense and to geographic perspective. These behavioral objectives include understanding of concepts and generalizations. Even map-reading skills are based upon an understanding of the meaning of such concepts as scale or grid or the many concepts represented by symbols. Skill in evaluating the competency and bias of witnesses is based upon an understanding of generalizations about the effects of bias and about the factors which make for competent and incompetent reporting of observations. To a far greater degree than in the case of physical skills, skills in the social sciences involve intellectual understanding. The reader is referred to the bibliography at the end of this paper.[3]

Our Project Social Studies staff agrees with the principles presented by Fraser and Johns in their chapter in the recent skills yearbook of the National Council for the Social Studies.[4] The principles listed here are largely reformulations of their principles.

1. Skills should be taught in connection with the content of a unit, not as separate units such as units on critical thinking or map reading. By studying skills in the context of a unit, pupils are more likely to see the need to learn the skills.

2. The teacher should make frequent checks on the pupils' early efforts to develop a skill, so that they will not develop bad habits. (For example, the teacher should check notes frequently after an initial lesson on note-taking. He should provide exercises on evaluating sources of information for bias and competency after introducing this skill, and he should go over these exercises to make sure that pupils understand why their performance has been good or poor.)

3. Pupils should have many opportunities to use a skill in relationship to many different topics both within a course, if the skill is introduced for the first time, and from one course to another throughout a K-12 program. If pupils are to learn to transfer skills to new situations, they should be taught to do so within each course. They should be asked to apply skills to new units, to situations in their neighborhood, and to current affairs.

4. Pupils differ in the degree to which they retain skills from year to year and also in the degree to which they learn them in the first place. Therefore, the teacher

needs to use various kinds of diagnostic devices to find out just how well each pupil remembers or has learned a specific skill.

5. There should be a sequential development of skills throughout the curriculum. As pupils advance through school a skill should be reinforced and expanded and more difficult skills should be taught. (For example, pupils can be taught to read simple map symbols at an early age and can learn to interpret additional, more difficult symbols as they progress from one year to another. Or they can learn to identify certain kinds of limitations of data at one grade level and other kinds at other levels.) Each course should build upon the skills which have been taught previously.

Some of the skills objectives may be taught informally, through the way in which the class is handled. For example, a number of the skills listed in part IX should be taught at every level by the way in which the class is conducted. However, most of the skills in this and other sections are listed as objectives for at least some units. Some of the sub-points under a skill are listed here to provide guidance for teachers but are not restated in units themselves.

BEHAVIORAL GOALS RELATED TO SKILLS

I. THE STUDENT WHO ATTACKS PROBLEMS RELATED TO THE SOCIAL SCIENCES IN A RATIONAL MANNER:

   A. Is alert to incongruities, recognizes problems, and is concerned about them.

   B. Selects problems to study according to specific criteria such as:

      1. Is it a problem on which verifiable data can be collected?

      2. Is it a problem on which I can collect enough information to deal with it satisfactorily?

      3. Is the problem delimited enough so that I can deal with it in the length of time I have available?

   C. Defines problems by isolating the basic issue, defining terms, identifying assumptions and values involved, determining sub-problems which must be investigated, and identifies factual questions which need to be answered in debates over courses of action involving value conflicts.

*D. Considers the relevance of each of the social science disciplines, and uses the types of questions asked and the analytical concepts used in the relevant disciplines to help him analyze the problem.

E. Considers possible hypotheses and/or alternative courses of action.

1. Sets up hypotheses.

2. Clarifies and refines hypotheses.

3. Deduces possible consequences (if-then) statements to guide his collection of data.

4. Considers possible consequences of alternative courses of action.

   a. Having determined the causes of a social problem, considers alternative courses of action and hypothizes about probable consequences of each course of action.

F. Sets up simple experiments or some other appropriate technique for testing his hypotheses.

1. Figures out ways of testing hypotheses.

2. Sets up simple experiments.

3. Uses scatter diagram to test hypotheses.

II. THE STUDENT WHO IS SKILLED IN LOCATING INFORMATION IN THE SOCIAL SCIENCES:

A. Is able to use the aids in a book such as the table of contents and the index.

B. Is able to use library files.

1. Card catalogue (subject, author, and title cards).

2. Vertical file.

C. Knows what index to use for a particular purpose and how to use it.

1. Reader's Guide to Periodical Literature

2. Book Review Digest

D. Uses appropriate reference books and sources to locate different types of information.

1. Knows what encyclopedia to use and how to use it.
    - a. Uses general encyclopedias
    - *b. Uses Dictionary of American Biography
2. Uses references to locate information about living people.
    - a. Twentieth Century Authors
    - b. Current Biography
    - c. Webster's Dictionary of Biography
    - d. Who's Who in the United States (and specialized Who's Who editions)
3. Uses yearbooks and specialized statistical references to locate information.
    - a. Uses almanacs
    - *b. Uses Stateman's Yearbook
    - *c. Uses U.S. Government Manual
    - *d. Uses Statistical Abstract
    - *e. Uses State Legislative Manual
    - *f. Uses census volumes
    - *g. Uses Historical Statistics of the U.S.
    - *h. Uses Survey of Current Business.
    - *i. Uses Economic Report of the President

E. Uses dictionaries effectively.

1. Alphabetizes words in order to locate topics.
2. Uses guide words at top of pages.
3. Uses dictionary to learn how to pronounce words.
4. Uses dictionary to learn the meaning of words.
    - a. Can choose the correct meaning of a word by relating the meaning to the context in which he found the word in a book.

*F. Uses different types of atlases.

    1. Uses general atlases

    2. Uses historical atlases of various kinds.

G. Locates information on local community by using telephone directory.

H. Skims to locate information.

    1. Picks out key words to use in skimming for information.

    2. Locates information quickly in newspapers by using headlines and first paragraphs of articles.

III. THE STUDENT WHO IS SKILLED IN GATHERING INFORMATION IN THE SOCIAL STUDIES:

A. Uses sub-questions or deduced consequents of hypotheses to guide him in collecting relevant data.

B. Reads with understanding.

    1. Reads to answer questions.

    2. Reads for the main idea or ideas; is able to use introduction, summaries, headings, first sentences in paragraphs, and signal words to pick out main ideas.

    3. Reads for details.

        a. Reads for details which support or contradict generalizations and main ideas.

        b. Identifies words and phrases which are intended to persuade.

        c. Identifies assumptions, stated and unstated.

        d. Reads for comparisons.

    4. Reads to organize what is read.

        a. Relates details to main ideas.

        b. Works out structure of material read.

        c. Relates ideas to ideas acquired from other sources, and organizes own structure for topic.

    5. Adjusts reading rate to:

        a. Purpose in reading.

b. Type of material reading.

*6. Reads social studies terms with understanding.

a. Increases his understanding of social studies vocabulary by studying context in which words are used.

C. Takes effective notes on his reading.

1. Outlines a chapter.

2. Uses note cards.

D. Interprets tables, graphs, and charts.

1. Studies the title, headings, and legend.

2. Looks for big idea first and then studies details.

3. Looks for graphic devices which may be misleading (e.g. omission of zero on graph scale, changing size of graph symbols, etc.)

4. Interprets different kinds of graphs (pictographs, bar, circle, line).

5. Interprets charts (notes relationships).

a. Interprets flow charts or models.

b. Interprets diagrams.

6. Draws inferences from tables, charts, and graphs.

E. Gains information by listening.

1. Listens to structured speeches for main ideas, supporting details, and evaluating what he hears.

2. Listens to discussion for main ideas, supporting detail and to evaluate what he hears.

3. Takes effective notes on oral activities (discussions, oral reports, informal talks or lectures).

a. Adjusts type of note-taking to type of oral presentation.

F. Gains information by studying pictures, cartoons, films, realia, models and things which he sees around him.

1. Draws inferences from pictures.

2. Uses models to make sense out of complex data and to help him analyze data.

G. Gains information through interviews and surveys.

*H. Increases the accuracy of his observations through the use of:

  1. Scales and indices.

  2. System of taking notes on observations (observation schedules).

  3. Questionnaires.

  4. Content analysis techniques.

I. Uses simple sampling techniques.

J. Gains information by conducting or observing simple experiments.

K. Uses a variety of sources of information.

IV. THE STUDENT WHO IS SKILLED IN EVALUATING INFORMATION:

A. Identifies the main idea of an oral, written, or visual presentation.

B. Distinguishes between relevant and irrelevant information and notes whether that which is relevant supports or contradicts the idea to which it is related.

  1. Detects persuasion devices.

C. Checks on the accuracy of information and decides how much faith to put in the source.

  1. Checks facts against his own background of information and collects additional information when he needs it to check the facts.

  *2. Checks on the bias and competency of witnesses, authors, and producers of materials.

    a. Distinguishes primary sources from secondary accounts.

    b. Chooses the most reliable source of information in terms of bias and competency of authors.

      1) Notes whether author would be hurt by an opposite report, what his purpose was in preparing his account, what attitudes he expresses (in preface, within account, through colored words and phrases, through quoting of biased sources, etc.), what connections he holds which might affect his attitudes.

2) Notes opportunities of witness to observe place or event, how closely he did observe event, his training and qualifications for observing or studying places or events, the time elapsing between observation and writing of account.

3) Notes author's training, position, status in profession, sources of information, techniques for collecting and analyzing data, etc.

4) Compares sources of information. Looks for points of agreement and disagreement among witnesses and authors and reports of research studies.

3. Recognizes differences in difficulty of proving statements.

   a. Distinguishes between fact and opinion.

   b. Distinguishes between facts, inferences, and value judgements.

   c. Distinguishes between facts and estimates.

   d. Differentiates between descriptive, causal, predictive and normative questions and statements.

4. Identifies and examines assumptions to decide whether he can accept them.

   a. Identifies cultural assumptions.

D. Checks on the completeness of data and is wary of generalizations based on insufficient evidence.

1. Rejects assumption of cause-effect relationship in correlations; looks for another factor which may affect both parts of correlation.

2. Rejects post hoc arguments; looks for another factor which may have caused the latter event.

3. Is sceptical of single-factor theories of causation.

4. Rejects whole-part arguments and insists upon further data.

5. Rejects all-none reasoning.

6. Identifies card stacking.

7. Is alert to the use of biased years in making comparisons.

8. Examines sample used in study to see if it is representative of population for which generalizations are being made.

9. Looks for causative factors other than those mentioned in source of information.

E. Detects inconsistencies in material.

V. THE STUDENT WHO USES EFFECTIVE GEOGRAPHIC SKILLS:

A. Has a sense of distance and area:

1. Compares distances in general terms such as large, shorter, or the same.

2. Compares distances and areas with known distances.

a. Knows distances north and south and distances east and west in his own state and in United States.

b. Knows area of own state and of United States.

c. Knows area of a football field, of the school playground, etc.

B. Has a sense of direction:

1. Knows cardinal directions.

a. Can determine the cardinal directions by looking at the sun or by using a compass.

2. Knows intermediate directions.

3. Notices directions and is able to set a directional course and follow it.

a. Notices directions in his school building and in his neighborhood.

b. Uses landmarks in his locality to determine directions.

c. Notices directions in relationship to his own town, state, and country.

C. Interprets maps and globes:

1. Uses compass rose to tell directions on map.
2. Can use the map or globe grid to:
    - a. Recognize directions.
        - 1) Knows that the north pole is always north and the south pole is always south, regardless of the type of map projection.
        - 2) Knows that meridians run north and south and parallels run east and west.
    - b. Orient a map:
        - 1) to the north.
        - 2) in the direction in which one is going.
        - 3) with another map or with a globe.
            - a) Orients large-scale maps in their place on small-scale maps.
    - c. Locate places.
        - 1) Uses road map grid.
        - 2) Uses atlas index using degrees of longitude and latitude.
    - d. Estimate distances north and south on large wall map where distortion makes scale invalid.
    - e. Detect type of distortion on any type of map projection.
    - f. Compare maps of different scale.
    - g. Identify time differences.
3. Uses different types of map scale and is in the habit of estimating distances.
    - a. Understands use of scale on maps.
    - b. Differentiates between small scale and large scale maps and knows when to use each.
    - c. Estimates distances by using:
        - 1) a statement scale.
        - 2) a graphic scale.

            3) a proportional or representative fraction scale.

        d. Can transform one type of scale into another.

    4. Interprets different types of map symbols.

        a. Understands the use of symbols to represent reality.

        b. Interprets map symbols in terms of legend.

        c. Identifies pictorial and semi-pictorial symbols.

        d. Recognizes symbols for land and water on map or globe.

        e. Understands use of color layers; interprets color layers in terms of legend rather than in same way all of the time.

        f. Interprets shading so as to visualize surface relief.

        g. Interprets color gradients on physical maps.

        h. Understands meaning of dot symbols when dots are used to represent things rather than cities.

        i. Understands use of isometric lines in terms of map legend.

            1) Uses contour lines to visualize an area.

            2) Uses other types of isolines which represent points of equal, absolute value.

            3) Uses isopleths which connect points of equal ratio.

    5. Draws inferences from a comparison of different map patterns of same area.

    6. Selects the appropriate type of map projection (or globe) to use for a specific purpose.

D. Visualizes images of basic map patterns.

    1. Is able to visualize a generalized map of his own town, county, and state.

   2. Is able to visualize a generalized map of the United States.

   3. Is able to visualize a generalized map of the different continents.

- E. Uses maps to depict information in order to identify patterns in data (uses maps to organize and illustrate data.)

- F. Develops a system of regions to fit a particular purpose.

- G. Is in the habit of asking "Where?", of looking at events in terms of relative location.

VI. THE STUDENT WITH A WELL DEVELOPED SENSE OF TIME:

- A. Knows how time is measured.
  - 1. Understands the relationship of time to earth-sun movements.
    - a. Understands relationship of night and day to rotation of earth.
    - b. Understands relationship of seasons to revolution of earth around sun.
    - c. Understands relationship of length of year to revolution of earth around sun.
    - d. Understands time zones and international date line in relationship to rotation of earth.
  - 2. Understands time measurements.
    - a. Understands system of seconds, minutes, hours, days, weeks, months, and years.
    - b. Can tell time by the clock.
    - c. Understands and can use conventional system of chronology (BC-AD dates).
- B. Understands the vocabulary of time.
  - 1. Understands definite time references.
    - a. Measured periods of time (e.g. decade, century)
    - b. Specific points in time (e.g. noon, mid-century)

2. Interprets indefinite time references with accepted meaning.
    a. Periods of time (e.g. dynasty, generation)
    b. Time relationship (e.g. before, after, future, P.M., A.M., biennial, biannual, prehistoric times, preindustrial, first, second, finally).
3. Interprets indefinite time references without accepted meanings in terms of author's frame of reference.
    a. Periods of time (e.g. an age, epoch).
    b. Time relationship (e.g. ages ago, at the beginning of modern times, years ago, in the near future).

C. Has a sense of the passage of time.
    1. Differentiates past, present, and future.
    2. Notes durations of periods or events. (Compares lengths of periods or events.)
    3. Notes duration of period between event and present day.

D. Looks for possible relationships among events.
    1. Arranges events chronologically.
        a. Within own experiences.
        b. Within one country.
        c. Within world-wide time framework.
    2. Makes and interprets time lines.
    3. Has developed a mental time framework for important periods and knows a series of important pivotal dates around which he can arrange new dates which he comes across.
    4. Asks himself what else happened at the time of an event, what happened before the event, and what happened just after the event. Looks for possible relationships among these events.

E. Sees meaningful differences between eras; notes relationship within any era between institutions and cultural assumptions.

VII. THE STUDENT WHO IS SKILLED IN ORGANIZING AND ANALYZING INFORMATION AND IN DRAWING CONCLUSIONS:

A. Identifies differences in data.

B. Classifies or categorizes data.

C. Applies previously-learned concepts and generalizations to new data.

*D. Makes participant-observor distinctions.

1. When studying historical data, attempts to determine both the actors' interpretations of a situation and their behavior but also the anticipated and unanticipated consequences of such actions and the "real" situation of the actors.

2. Tries to assess how many members of any society share how many norms and values how similarly.

*E. Uses ideal-types in analyzing social data.

F. Uses simple mathematical and statistical devices for analyzing data.

G. Draws inferences from data.

H. Develops charts and graphs to clarify data and ideas or to aid in the analysis of data.

I. Organizes his information according to some logical pattern which fits his topic.

J. Tests, refines and eliminates hypotheses, working out new ones where necessary.

K. Studies his data to see if he needs to gather more data before coming to a conclusion.

L. Draws tentative conclusions from evidence from a variety of sources.

M. Checks back over his reasoning against basic principles of logic and looks for inconsistencies, limitations of data, and irrelevancies in his work.

N. Having determined the causes of a social problem, scrutinizes possible consequences of alternative courses of action, evaluates them in the light of basic values, lists arguments for and against each proposal, and selects the course of action which seems most likely to prove helpful in achieving the desired goal.

O. In situations calling for action, decides whether or not to act upon the basis of a theory by considering such questions as:

1. How well does the theory explain the facts? How many facts does it fail to explain? How important are these facts?

2. How much more powerful do the arguments for one course of action seem than the arguments for other courses of action?

3. Is there time to get additional facts before a decision must be reached?

4. What will be the results of failure to act?

5. What risks are involved in acting if the theory or plan is faulty?

VIII. THE STUDENT WHO COMMUNICATES EFFECTIVELY WITH OTHERS:

A. Clarifies his purpose or theme.

B. Organizes his material to fit his theme and follows his organization.

C. Considers the audience for whom he speaks or writes.

D. Uses techniques to clarify ideas and arouse interest.

1. Uses good introductions and summaries.

2. Uses unified paragraphs and topic sentences.

3. Uses headings or words to make his organization stand out clearly.

4. Defines his terms.

5. Uses simple, direct language and clear sentences.

6. Uses concrete examples.

E. In writing:

1. Uses acceptable bibliographic and footnote form.

2. Avoids plagerism.

3. Uses proper spelling and punctuation.

4. Varies his sentence structure to increase interest.

5. Checks his work for errors.

F. In speaking:

  1. Is poised and exhibits self confidence.

  2. Pronounces words correctly, enunciates clearly, speaks loudly enough so that he can be heard, speaks smoothly, and uses various techniques for emphasis.

  3. Uses only a few notes for reports and discussions.

  4. Limits the length of a talk or his part in a discussion.

  5. Uses the proper degree of formality for the occasion.

G. Presents effective oral reports.

H. Makes effective group oral presentations (symposia, panels, roundtable discussions).

IX. THE STUDENT WHO WORKS EFFECTIVELY WITH OTHERS:

A. Empathizes with others, seeing things through their eyes, whether he accepts their viewpoint or sympathizes with them or not.

B. Helps create and preserve an atmosphere in which all members of a group feel secure and anxious to participate.

  1. Is considerate of other people's feelings without giving up his own principles.

  2. Critizes ideas, not personalities; does so tactfully.

  3. Is neither dogmatic nor patronizing.

  4. Gives credit to others where it is due; tries to give others opportunities for personal satisfaction and recognition.

  5. Respect the rights and opinions of others.

C. Is willing to study ideas objectively, without becoming upset by criticism of his ideas; is able to profit from criticism.

D. During discussions, keeps to the point, helps move the discussion along and searches for points of agreement.

E. Understands the necessity for rules in any social organization; unless he can get the majority to change a particular rule, abides by it.

F. Accepts his share of responsibility for the work of a group; participates actively without trying to dominate.

    1. Schedules work on group projects and keeps to schedule.

G. Holds himself accountable for his own actions and does not blame others for his failures.

H. Treats people as individuals, not as members of a particular group.

I. Cooperates with others toward common goals, but rejects unthinking conformity.

FOOTNOTES

1. See the Project Social Studies Discipline Paper for the methods of inquiry and special techniques used in each field.

2. See last two pages of paper.

3. See also Project Social Studies Paper "Implications of Learning Principles for Curricular Development in the Social Studies."

4. Dorothy McClure Fraser and Eunice Johns, "Developing a Program for the Effective Learning of Skills" in Helen McCracken Carpenter, editor, Skill Development in Social Studies, 33rd yearbook of the National Council for the Social Studies, Washington D.C.; The Council, 1963, pp. 311-312.

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1628

Background Paper

THE ROLE OF THE SOCIAL STUDIES IN DEVELOPING VALUES

Edith West and William Gardner

Statements of objectives in social studies have usually indicated a desire to inculcate certain attitudes or values related to life in general or American society in particular. These objectives range from a desire to teach habits of neatness, promptness, and cleanliness to a desire to teach an appreciation of the cultural heritage and those values which are essential ground rules for the continued operation of our society. The frequency of such statements and the importance of value considerations make it necessary for any group to reach consensus on the role of values in the social studies before a new curriculum can be developed.

Concern over values in social education may be traced to a solid commitment to the broad objective of "good citizenship". Education for citizenship has been one of the major and explicit goals of American schools ever since the early days of our nation. Although citizenship has been seen as a fundamental objective of the school as a whole, social studies teachers have insisted that they have a major role in teaching the habits, attitudes, and values which are requisites of good citizenship.

Nevertheless, the role of values in the social studies program is not easily determined. It is difficult to achieve agreement upon which values should be taught. Questions are raised about the effectiveness of programs designed to teach values. To what extent can the social studies program teach values unless they are reinforced by experiences outside of the classroom? And finally, a growing number of people are challenging the teaching of values as a legitimate function of the social studies program. A number of social scientists reject the idea of citizenship education. They and some educators fear the perversion of the social science disciplines by the crass indoctrination of values, including perhaps those of certain influential pressure groups in society. They urge social studies teachers to limit themselves to the teaching of the content of the disciplines and the methods of advancing knowledge in the fields. Even these critics, however, do not reject all teaching of values or the use of values as content data. They believe strongly that students should be taught to value the social sciences, curiosity about human behavior, and scientific beliefs related to methods of inquiry. They propose that pupils study values as one type of social science data. They believe that pupils should examine the values held by different groups, how these values are acquired, and value conflicts in our society and among different nations.

Any attempt to reach conclusions about the role of values as objectives in the social studies program should be based upon the answers to a series of questions.

First, to what extent are values involved in the social sciences themselves? Are social scientists affected by values in their work as social scientists? Are some values an inseparable part of any social science discipline because they are working postulates in the field? In other words, are there some values which need to be taught because they are an inherent part of the work of social scientists? Can the social sciences guide people in setting up value systems? What role can the social sciences play, if any, in helping people examine their values or achieve the goals they value? Answers to these questions should help in making a decision about what should be taught in school subjects based upon the social science disciplines.

Other questions also need study. What can the social sciences tell us about the role of values in a society or about the importance of values to individuals? What is the role of the school in society, both in terms of transmitting the cultural heritage and in helping pupils themselves? Are there some values which must be taught if the school is to operate effectively as an organization? And finally, how much impact can schools make upon values? If the impact is small, it would be foolish to establish values as goals of the social studies program.

Values and the Social Sciences

In one sense, the social sciences are value free. The content from the social science disciplines cannot be used to prove to people that they should value certain things. True, the social sciences can be used to help people understand the consequences of holding certain value positions. Learning these consequences may affect the values which they hold, if these consequences run counter to other things which they value. If not, such information is unlikely to affect their values. As Rose points out, even the "desirability of teaching or studying sociology or any other science is a value. There is no way of proving this to be good or bad. One can only try to persuade by using such arguments as: 'A knowledge of sociology will enable us to reduce juvenile delinquency, or drop-outs, or divorce.' If one is unconcerned with reducing delinquency, the argument fails".[1]

Nevertheless, the values and beliefs of social scientists are affected by their studies. Anthropologists studying many different cultures are likely to reject ethnocentrism and value the contributions of other peoples. Aware of constant change in the past, the social scientist is unlikely to value the status quo because he rejects all change. On the contrary, he is likely to value change as a possible means of correcting social problems which he dislikes, but he is unlikely to equate change with progress. Like other people who hold basic societal values, social scientists are also likely to adopt certain value positions because of the evidence from their fields about consequences of different value positions.

Although it is frequently said that the social sciences should be value-free, social scientists, like other scientists, are affected by values in their behavior as scientists. Most important among these values are those related to knowledge and the means by which men can best advance knowledge. Social scientists, for example, value the scientific method and rational thought, objectivity in examining evidence and reporting findings, the free exchange of ideas, curiosity, independent thought, and scepticism of the finality of knowledge.[2]

Values also affect the topics many social scientists choose to study.[3] The sociologist who values human dignity and freedom of equality for all may study racial discrimination and causes of prejudice. The economist who values material welfare for people tries to discover the causes of business cycles. Historians who value human life may focus upon the casus of past wars.

Many social scientists include postualtes or value assumptions in their writings. The criminologist includes at least the implicit assumption that crime is bad.[4] An economist may be even more explicit in his study of comparative economic systems by stating criteria for comparison such as those presented by Bach: "(1) Does the system provide a progressively higher standard of living for all? (2) Does it provide economic freedom and security for the individual? (3) Does it produce the goods and services consumers indicate they want? (4) Does it provide an equitable distribution of income?"[5] These criteria are obviously based upon certain value assumptions. Indeed, the economist assumes the value of efficiency in the economic system and the value of material wealth.

The ethics of the social science profession keep social scientists from selling their skills for inhuman purposes. Even if one could, by some stretch of the imagination, imagine the creation of a Society for the Promotion of Delinquency, it would be hard to imagine a sociologist going to work for such a society. The close relationship between the social sciences and the valuation placed upon human welfare is expressed by Oscar Lange: "For it is the desire for change and betterment, whether conscious or subconscious, which creates the inquisitiveness of mind resulting in scientific investigation of human society."[6]

Values also enter into research design. Scientists refrain from using some types of experiments because of the value they place upon human dignity and welfare. "If American scientists," writes Mercer, "do not use the very efficient means of immersing individuals in tanks of ice water to test the effect of extreme cold on bodily functions..., it is in part because American valuation of human life makes such behavior unthinkable."[7] A few social scientists might worry about legal reprisals or reprisals from their profession and their colleges if they were to conduct experiments which would injure human beings; most, however, would refuse to undertake such experiments because of their own values. The valuation placed upon human life and dignity and the right to privacy is so important, that it is considered a part of professional ethics. Social scientists, for example, would be severely frowned upon by their profession if they were to disclose the names of people who gave them information in confidence.[8] It would be considered unprofessional to administer a truth serum to anyone without his knowledge in order to probe into his private thoughts. In fact, unless the truth serum were administered in order to help the individual, it would be considered unethical as a means of obtaining information.

Values also affect the acceptance and rejection of hypotheses. Usually in the social sciences, the evidence for or against an hypothesis is not so conclusive as in the natural sciences. "Acceptance of a hypothesis," writes the sociologist Furfey, "is seldom imposed forcibly by the facts. Normally acceptance depends on series of delicate value judgements."[9] A social scientist may accept a generalization without certainty because he thinks it a better basis for action than any other, and he thinks some action crucial because of values he holds. Criminologists, for example, would like greater verification of their generalizations, but they believe that these generalizations should be used until better knowledge is available. Social scientists differ in the degree of conclusiveness which they demand before accepting an hypothesis as a tentative basis for action. Some consider the seriousness of failure to act upon problems facing society, and will accept a lower level of certainty than will others who are more concerned about not making the mistake of accepting an hypothesis which may later prove to be false.[10] The level of significance which statisticians set in sampling studies, for example, is a matter of choice; it depends upon the degree to which they wish to avoid two types of errors: the error of rejecting a true hypothesis and the error of accepting a false hypothesis. To the extent that they are not automatically abiding by statistical tradition or attempting to win the respect of fellow scientists by abiding by this tradition, they may consider the relative advantages and disadvantages of failing to take action or of acting upon less than conclusive findings. The level of significance in tests of drugs, for example, is usually set in part by the side-effects of the drug (or the seriousness of using the drug if it is not effective) and the probable consequences of failure to use a drug which might help. Thus the level of significance would probably be set at one point if the illness is mild, at a different point if no other cure has yet been found for a killing or crippling disease. Obviously, value judgements do enter into the decisions of many medical scientists and social scientists. Some social scientists try to keep from letting their value judgements affect these decisions by always using the same, high level of significance. These social scientists avoid letting their values affect a decision about any one hypothesis, but they are letting their value for certainty and rigor affect all of their decisions. In this case, however, their decision to accept or reject hypotheses is affected by scholarly values, not other types of values.

Anthropologists and some sociologists also value the uses of empathy, not particularly for its effect on human relations, but "as a technique of behavioral research" to help the social scientist understand the people he is studying.[11] Teaching pupils to empathize thus has support from the needs of social science disciplines as well as from the desire to develop public values.

The Importance of Values to Society and to Individuals

Sociologists and anthropologists agree upon the importance of values to any society. According to Williams, "There are limits--although rather wide ones--to the degree of incompatibility of beliefs and values that can exist in cultures or in individuals short of the disappearance of a meaningful system."[12] Any society is doomed to internal disorder and chaos unless there is general acceptance of certain rules by which to act. Some of the basic values in this country are "process values"[13] or those related to the ground rules for operating a democratic form of government.

Sociologists and psychologists agree that those people who have become alienated from the values of their culture and who have not developed a pattern of values by which they guide their lives, tend to be unhappy people.[14] Without consistent value patterns, the individual develops a "sense of aimlessness" and "great anxiety".[15] Those who are not committed to the social order lack "the emotional attachments that make life worthwhile".[16] Such lack of attachment sometimes leads to anti-social behavior or even suicide.[17]

Studies have also shown that anomic individuals are much less likely to participate in political affairs than those who accept group values and feel that life is worth while. Anomic individuals tend to reject most forms of political behavior, although some "may attempt to reintegrate with the society, ideologically and socially, through some totalitarian movement."[18]

Thus for the sake of helping pupils as well as for the sake of society it is important to develop the basic values of our democratic society. It is also important to help pupils examine their values and raise them to a level of conscious rather than unthinking attachment.

The Role of the School in Developing Attitudes

Schools in any society are established to help transmit the culture of that society to oncoming generations. The culture includes values as well as knowledge. At the very least it is the responsibility of schools in our society to help pupils develop those values which provide the ground rules for the operation of our society. If American society is to survive, people must value non-violent means of solving disputes, acceptance of the will of the majority until majority opinion can be changed, freedom of thought and expression so that individuals can criticize government actions and try to change majority opinion, and the right of a fair trial, partly as a means of protecting freedom of expression. Ground rules in our society call for respect for human rights and also for property rights. An individual is not permitted to harm others physically or to destroy or seize other people's property.

Transmitting the culture requires developing other values. As part of the task of teaching knowledge, schools need to teach those scholarly values which are inherent in the different disciplines. Schools in our society are given responsibility for helping to train children to carry on the economic life of the nation in an efficient manner.[19] Society thinks it important to teach pupils to value punctuality, achievement, and work--values important if they are to become productive members of society.

American schools have long been thought of as a means of providing individuals with equal opportunity to develop their talents.[20] In addition to teaching skills and knowledge needed by an individual to obtain and hold a job commensurate with his abilities, schools must attempt to give the pupil who does not receive it from home, the motivation to learn and to do his best at any task.[21] Schools fail to help pupils take advantage of equal opportunities unless schools help them develop such values needed for success in our modern, complex economic life. Nor can a child be helped to use his ability unless he develops a sense of his own personal value. A feeling of self-worth is impossible unless other children respect him as a human being.[22] Teachers who fail to help children learn a respect for human dignity, fail to do their part in helping children develop the self-respect needed to take advantage of schooling.

Because of the democratic belief in the value of human dignity, schools have also been thought of as a means of achieving a "rich and happy life for all Americans" or of promoting the "good life for all".[23] Happiness, as was pointed out earlier, seems unlikely unless pupils become committed to some value system. Happiness also depends upon the ability of people to develop warm relationships with others.[24] This ability depends in part upon the ability of a person to predict fairly accurately how other people will react to certain things which he says or does. This ability, in turn, is dependent in part upon the degree to which pupils can be helped to develop social sensitivity to the feelings of others.[25] Such sensitivity is likely to develop a sense of the value of human dignity.

Apart from any job of transmitting culture, a school must inculcate some public values if it is to operate efficiently as an organization. A school cannot operate effectively unless all teachers attempt to teach pupils certain values such as punctuality, doing a good job, cooperation, tolerance for others, honesty, and respect for school property and the property of others.[26]

Can Values and Attitudes be Taught in Schools?

Since research studies are based upon attempts to measure changes in attitudes rather than values, it is essential to note the relationship between these two concepts. In the early part of this century, Thomas and Znaniecki, two famous sociologists, defined an attitude as "the individual counterpart of the social value".[27] Today, values and attitudes are more likely to be differentiated in terms of breadth or generality. "A value," according to Broom and Selznick, "affects a wide range of thought and behavior in part by generating attitudes".[28] An attitude consists of a predisposition to think or act negatively or positively toward something somewhat more specific. Valuing human dignity or welfare may lead a person to develop negative attitudes toward war or discrimination or poverty. Although this paper has dealt thus far with values, the question raised in this section can be answered in the final analysis only in terms of studies of more specific attitudes which are likely to grow out of broader values.

There is general agreement among social scientists, however, that both values and attitudes are learned. People take on the values and attitudes of those whose approval they wish to secure. Many of the basic values and attitudes are acquired in early childhood from parents, siblings, and other close associates. As a person grows older, he tends to accept the values and attitudes of those whom he admires and of his reference groups, that is, the groups which he admires and to which he either belongs or would like to belong.[29] Many of the scientific values, for example, are acquired by high school or college students who aspire to enter the scientific profession. As Rose points out, even sociologists acquire many of their values from those held by other sociologists.[30]

Values and attitudes may change, even though they tend to change slowly if at all.[31] Values and attitudes are likely to be modified if a person's reference groups change or if he identifies with someone different from those with whom he has identified in the past.[32] Thus, although many basic values are developed early in life, both they and many less strongly held attitudes may be affected as pupils grow older, develop new friendship groups, and identify with people other than their parents.[33] Values and attitudes also change as the result of drastic changes in society. Studies have shown, for example, that American values and attitudes were affected sharply by World War II and by the depression--events which affected the lives of Americans in obvious and dramatic ways.[34]

Unfortunately, effects of changed reference groups, changed identifying figures, and changed events upon young people have not been studied widely. A few investigations at the college level have shown that changed reference groups can produce attitudinal changes.[35] Studies of elementary and secondary school pupils indicate that parental influence on attitudes declines and the influence of peer groups increases as pupils advance in age.[36] By the time pupils enter junior high school, they are likely to discuss political affairs with friends, thus weakening influence of parents upon political attitudes.[37] The fact that many pupils acquire new peer groups as they enter junior and senior high school subjects them to conflict between old attitudes and new and makes them susceptible to attitudinal change. Those who are puzzled about what their values and attitudes should be are more likely to be affected by a study of information than those who hold strongly fixed attitudes.[38] Adolescents are frequently ready to differ from parents' views as a means of showing that they are growing up. This rebellion may also make them susceptible to shifts in attitudes.[39]

Identifying figures among adults change as pupils grow older. One study has shown that as pupils advance in school they are less likely than before to accept the views of parents when the views of parents and teachers are in conflict.[40] A study of seniors in high school has shown that student attitudes change somewhat in the direction of the attitudes of their social studies and English teachers, whether these attitudes are liberal or conservative.[41] Pupils' attitudes may also be affected by the attitudes of outstanding figures, past or present, whom they come to admire.[42]

It is probable that teachers who are liked and admired become identifying figures for many pupils at both the elementary and secondary school level. Consequently, these teachers may affect attitudes by example, as well as by direct teaching. Enthusiasm for the social sciences and for learning in general, casual comments about events or groups, admonitions when pupils mistreat others, approval of pupil comments which indicate creativity or critical thinking, a willingness to welcome questions and ideas which challenge his own, the habit of treating all pupils as worthy of consideration and respect--these and other behaviors may be very effective in modifying attitudes of pupils who admire the teacher.

Although little has been done to study the effect of important events upon attitudes, there is some indication that pupils are more likely to change their attitudes if they become involved emotionally.[43] A curriculum may achieve this result in several ways. It may use instructional materials such as feature films, documentaries, novels, and biographies which have more impact upon pupils than text materials or other types of non-fiction because pupils tend to identify with the characters and relive events in their imagination.[44] If these materials have an emotional impact, it is usually because the increased intellectual understanding of effects upon human beings makes a difference to those who already value human life and dignity. A curriculum may also be designed to show pupils the effects of social events upon their own lives. Like adults, pupils are more likely to become interested in topics and to develop attitudes about them if they feel that these topics affect them.[45] A curriculum may include planned experiences for pupil involvement in activities which give them a sense of participation in civic affairs. Through a process of ego-involvement, people tend to develop firmer, more favorable attitudes toward those things which they have worked to achieve.[46] Primary grade children's attitudes towards minority group members have been changed significantly through carefully planned contacts with a variety of individuals outside of the home.[47] New York City's "Higher Horizons" Project and its many prototypes scattered around the country indicate that attitudes toward such things as education, career study, and teachers can be drastically affected by well-planned school experiences.[48]

Results of investigations on the use of information as a means of changing attitudes of high school and college students are contradictory. Some have shown marked changes, some slight changes, some no change, and some changes in the direction opposite to the one desired.[49] It is probable that differing results are caused in part by differing techniques. Evidence does exist that given some techniques, the study of information can affect attitudes.[50] Remmers has found that such informational material may result in marked shifts, but that the attitudes may then revert somewhat in the direction of the original position, stabilizing somewhere between that position and the one held immediately after the presentation of material.[51] Research on the use of movies has shown that movies frequently affect attitudes and that the cumulative effect of a series of appropriate movies is far greater than that from viewing just one.[51] Even when the initial study of information fails to reveal any change in attitude, there may be some sleeper effect.[53] For example, a person who is prejudiced against Negroes may not lose his prejudice as a result of information, but the loss of intellectual rationalization for the prejudice may make him ashamed of his prejudice and so affect his behavior toward Negroes. It may also make him more likely to lose his prejudice if he is exposed to other experiences.

Findings of research have many implications for the school curriculum. First, if schools desire to teach values and attitudes they should provide sequential experiences beginning in the early grades when pupils' attitudes are more easily affected, and continuing throughout the school years.[54] Second, schools should not expect to change values or attitudes which are held strongly.[55] Third, schools can reinforce attitudes widely held in the community and they can give pupils an intellectual understanding to undergird values so that they will be less susceptible to change later.[56] Fourth, teachers should make sure that pupils study the implications of facts for value positions. Definite teaching to show these relationships is more effective in changing attitudes than study of the same topics without discussion of implications.[57] The social studies curriculum should include a study of conflicts between ideals and conditions in American life. Fifth, schools can change attitudes when existing attitudes are not strongly held, and they can develop attitudes toward topics on which pupils have no previously formulated attitudes.[58] Since many pupils have given little thought to ground rules for the operation of the political system or scientific knowledge, schools may be able to develop attitudes in these areas if these attitudes are not in conflict with pupils' basic values. The basic value needed to develop many of the public and even scholarly values is respect for human life and welfare. Luckily, this value is imbedded in the mainstream of American culture and is taught in most American homes and reinforced by other social institutions.

Although research findings indicate that schools can modify attitudes, some studies indicate that social studies programs have been relatively unsuccessful in teaching pupils to value either the social sciences or many of the basic ground rules of a democratic society. Investigations have been made of attitudes toward social science classes. Results are discouraging. A 1949 study in Los Angeles of those who had graduated a year earlier, found that United States history ranked second and civics fourth in the tabulation of least-liked subjects among girls. These same courses ranked high on the boys' list of least-liked subjects. United States history ranked first among boys as the least-helpful course in high school.[59] A fifteen year study in the Corona School District of California found that only the fine arts and foreign languages ranked lower than social studies in the tabulation of courses thought to be of greatest value by graduates. At the same time, however, these graduates expressed interest in many social science topics.[60] In 1949 Jersild and Tasch studied over 2000 elementary and secondary school pupils. Beginning in the fourth grade and continuing through high school, social studies was the only subject disliked by more pupils than those who liked it. Again, however, pupils checked many social studies topics among those they would like to study.[61] The pupils and graduates sampled in these studies cannot be said to be representative of those throughout the country, but these findings do indicate that some programs have failed miserably to develop interest in the social sciences.

Results of Purdue polls of adolescent opinions seemingly indicate that many adolescents hold values contrary to those related to basic ground rules of our society. Polls conducted in 1951 found that only 53% of those adolescents polled disagreed with the statement that "The government should prohibit some people from making public speeches." Only 60% disagreed with the opinion that "Certain groups should not be allowed to hold public meetings even though they gather peacefully and only make speeches." Only 34% disagreed with the position that "Some of the petitions which have been circulated should not be allowed by the government". Forty-nine per cent believed that "large masses of the people are incapable of determining what is and what is not good for them."[62] A follow-up study in 1960 indicated little change in adolescent attitudes on these topics.[63]

On the surface it appears that schools have not been effective in teaching certain attitudes considered basic to the operation of a democratic form of government. Perhaps the climate of opinion outweighed any attempts made by schools. It is also possible that school curricula were poorly designed to achieve attitudinal change. Analysis of the Purdue Poll of 1951 indicated that students who had taken a civics course were, if anything, less likely than other students to uphold the first amendment and procedural safeguards for those accused of crimes.[64] It should be emphasized, however, that results may have been due to the wording of questions rather than to the failure of pupils to uphold basic values. Perhaps these students had been exposed to value conflicts in concrete situations and were unwilling to accept certain statements without qualifications. On the other hand, if the Purdue results really are indicative of values held by students, social studies classes may not have provided pupils with enough opportunities to study the concrete effects of operating on the basis of one value upon the possibilities of achieving another. Study of abstract statements of American values may bring lip service without understanding and may have little effect upon pupils' attitudes toward concrete situations.

If educators accept the teaching of values as a valid goal of education, they must identify the values to be taught and develop curricula to emphasize topics permitting study of these values. To be successful, they should also use those types of teaching techniques and instructional materials which research studies have found most effective in inducing attitudinal change.

The Role of the Social Studies Program in Developing Values

Social studies teachers share with other teachers responsibility for teaching some of the values mentioned in this paper; they have a particular responsibility for developing those values which are ground rules for the operation of our society or which are inherent in the social science disciplines.

Even if social studies teachers wished to do so, it would probably be impossible for them to avoid letting values affect social studies classes. Values are likely to be affected by the content selected for study, materials of instruction and classroom techniques. Emphasizing the impact of the civil war upon civil liberties rather than devoting a major portion of a unit to military engagements may well affect attitudes of students differently than would a curriculum which reversed the emphasis. Having pupils read biographies or novels may develop empathy as well as intellectual understanding of a man's role or of the times in which he lived. Insisting that pupils let others be heard, not letting pupils ridicule others, insisting that work be turned in on time, insisting that pupils try to discover principles for themselves rather than accepting them from textbooks, permitting pupils to challenge ideas in books or those presented by the teacher or class members -- all of these techniques are likely to affect values whether the teacher is consciously attempting to do so or not. Social scientists point out that people are a product of their culture and probably cannot avoid letting their cultural values affect the curriculum. It is important, therefore, to make these values explicit so that curriculum builders and teachers will know what they are doing.

There are a number of problems related to selecting the values to be transmitted. People in our country disagree about many values. Which shall be selected? Even values which are held by people sometimes come into conflict in specific situations. We may value human life but also the speed and efficiency of automobiles. Should two values which at times conflict both be taught in the curriculum?

Although lack of complete agreement on public values in our society makes it difficult to determine the values to be developed, we do not need to rely solely upon the personal feelings of the curriculum maker. Anthropologists have studied the values of Americans. Political scientists have described the political process of our form of government and have identified attitudes which hinder or promote democracy. Sociologists can tell us something about the values which help make societies or institutions operate effectively and those which lead to social disorganization. A study of the social consequences of values can thus help the curriculum maker determine which values to teach. The public values selected as goals for this curriculum are presented at the end of this paper.

Unfortunately, some teachers and courses of study call for the indoctrination of values without permitting pupils to examine all points of view. Illustrative of this approach is a manual on "Planned Patriotism" for grades K-8 from the Arizona School Board Association. This manual is aimed at helping grade-school pupils "achieve a natural faith that is patriotically pure." One goal of the seventh grade program is "to teach the dangers inherent in buying too many products from foreign markets." In the eighth grade pupils should learn "that historical facts prove the superiority of the American way of life." The eighth grade program should also "point out that people have a right to own property" and "stress the importance of free enterprise."[65]

This approach to indoctrination of values is also illustrated by the teacher who informed her class that the reasons for Britain's demise in status (circa 1950) was directly due to a rejection of capitalistic ideals and "the lessons she could have learned from America's example." Any good American citizen, she said, could see the clear and present danger. "We don't want any of those ideas here."[66]

Eight states now have laws or state board of education requirements that courses on communism be taught in the schools. In 1964 Roland F. Gray analyzed the stated aims of these courses. He concluded, among other things, that the courses tended "to contrast the darkest realities of communism in the Soviet Union with the noblest ideals of American democracy." He also found that the courses used "emotionally loaded words" and presented "only one point of view." Moreover, they concentrated on the "fallacies and failures of communism. Little or no attention is given to its strengths and successes."

The above examples illustrate the way in which some people have interpreted their "duty" to inculcate values about American democracy or capitalism. Such an approach has no place in a social studies program.

Furthermore, some teachers fail to distinguish between inculcating process values which serve as ground rules for our society and specific policy issues. Thus one teacher may attempt to persuade his pupils that a current bond issue should or should not be passed, that medicare would be good or bad, that labor unions are in the right or in the wrong in a current labor-management dispute, or that the United Nations is good or bad. Such attempts to inculcate attitudes toward specific issues is even more reprehensible than attempts to inculcate certain values without permitting free discussion. To inculcate values which are essential to the continuance of our democratic society is a far cry from propagandizing for one point of view in a current controversial issue. Parents have a right to expect teachers to provide pupils with an opportunity to study all points of view on such issues, without attempts by the teacher to impose his views. One of the major reasons for teaching controversial issues is to provide pupils with opportunities to learn to think critically and to develop the scholarly values. Such goals are made impossible if the teacher attempts to indoctrinate his own point of view.

A social studies program should help develop values by having pupils study topics related to value conflicts and by having them use the social sciences to help understand the consequences of different value positions and the "compatibilities and incompatibilities in values (which values support and reinforce each other, and which values impair and hinder realization of others)."[68] It is unwise to develop an unthinking acceptance of values; lack of understanding of the implications of values may lead both to rejection of them completely when they are in temporary conflict or to retention of them when they may no longer be useful because of changes in society.

It is important that pupils study values as social data, and that they learn to resolve value conflicts. Pupils cannot understand many social phenomena or social problems unless they understand values of the many groups involved in a conflict situation. They cannot develop useful solutions for problems unless they attempt to foresee the consequences of certain courses of action; these consequences will depend in part upon what different groups value and so how they will act given certain circumstances. Furthermore, two values are often in conflict. Pupils need to see that they can value different things, but that at times they must decide which they value most. They can learn to do this by using the social sciences to predict the consequences of taking different courses of action or holding different value positions in a particular situation. The social studies curriculum, therefore, should include heavy emphasis upon content related to important value conflicts in our society. Social scientists, just like all scientists, frequently let their values affect the subjects and particular topics which they study. There is no reason why a social studies curriculum should not focus upon topics related to key public values. Or, just as a sociologist selects for study certain problems which he sees in society--problems usually related to disputes between ideals and actuality, so the curriculum maker can focus on such problems.

No social studies program can be condemned if pupils do not develop the values listed as goals. Schools are not the only agent of society for passing on the cultural values. Moreover, all of the curricular areas have a role to play in helping pupils develop many of the values. Nevertheless, the social studies program should have the development of some values as a major goal.

BEHAVIORAL GOALS RELATED TO VALUES

I. Scholarly Values Inherent in Social Sciences.

1. Values the scientific method and rational thought as applied to social as well as to natural data.
2. Respects evidence even when it contradicts prejudices and preconceptions.
3. Is sceptical of "conventional truths" and demands that widely-held and popular notions be judged in accordance with standards of empirical validations.
4. Is sceptical of the finality of knowledge; considers generalizations and theories as tentative, always subject to change in the light of new evidence.
5. Searches for evidence to disprove hypotheses, not just to prove them.
6. Values objectivity and desires to keep his values from affecting his interpretation of evidence, although recognizing the important role of values in the process of making decisions about problems which demand action.
7. Is committed to the free examination of social attitudes and data. Searches actively for different points of view and interpretations. Values independent thought.
8. Evaluates information and sources of information before accepting evidence and generalizations.
9. Is curious about social data and human behavior and wishes to read and study further in the social sciences.
10. Values knowledge for the sake of knowledge, as a means of helping man understand the world in which he lives.

II. Attitudes Growing Out of Knowledge of Social Sciences.

1. Is sceptical of theories of single causation in the social sciences and is equally sceptical of panaceas.
2. Values change as a means of achieving goals but does not equate change with progress.
3. Is patient with attempted reforms; looks at current situations from the perspective of the time needed for changes in the past.
4. Believes that people of different interests, abilities, and background can contribute to American society.
5. Appreciates and respects the cultural contributions of other countries, races, and religions.
6. Believes that the social sciences can contribute to men's welfare by providing information and explanatory generalizations which help them achieve their goals.

III. Public Values.

1. Feels a sense of responsibility for keeping informed about current problems.
2. Has a sense of responsibility for taking informed action about problems confronting the nation.

3. Accepts the will of the majority until it can be changed by peaceful means.
4. Supports freedom of thought and expression.
5. Values procedural safeguards needed for a fair trial of those accused of crimes.
6. Values human dignity.
7. Evaluates proposals and events on the basis of their effects upon individuals as human beings.
8. Values institutions as a means of promoting human welfare, not because of tradition; is willing to change institutions as times create new problems.
9. Treats people as individuals, not as members of a particular group.
10. Believes in equality of opportunity for all.
11. Desires to protect the rights of minorities.
12. Is sensitive to the feelings of others.
13. Has a reasoned loyalty to the United States and desires to make it an ever-better place in which to live.
14. Believes in the possibilities of improving social conditions.
15. Cooperates with others toward common goals, but rejects unthinking conformity.
16. Values initiative, hard work, honesty; but does not scorn those who lack ability or cannot find jobs.
17. Respects public property.
18. Respects the rights of others.

FOOTNOTES

1. Project Social Studies Discipline Paper on Sociology, p. 12.

2. For example, see W. H. Wekmeister, "Theory Construction and the Problem of Objectivity", in Llewellyn Gross, editor, Symposium on Sociological Theory, New York: Harper and Row, 1959, p. 501; Blaine E. Mercer, An Introduction to the Study of Society, New York: Harcourt, Brace, 1958, pp. 14-15; John T. Dobey, editor, An Introduction to Social Research, Harrisburg: Stackpole, 1954, p. 18.

3. For example, see David Easton, The Political System, An Inquiry into the State of Political Science, New York: Knopf, 1963, pp. 225, 237; David E. Apter, "Comparative Politics and Political Thought: Past Influences and Future Developments", in Harry Eckstein and David E. Apter, editors, Comparative Politics, A Reader, Glencoe: Free Press, 1963; p. 735; Ernest Nagel, "The Logic of Historical Analysis", in Herbert Feigl and May Brodbeck, editors, Readings in the Philosophy of Science, New York: Appleton-Century-Crofts, 1953, pp. 691, 694.

4. Paul H. Furfey, "Sociological Science and the Problems of Values", in Gross, p. 509.

5. George L. Bach, Economics, Englewood Cliffs: Prentice-Hall, 1957, p. 817.

6. Oscar Lange, "The Scope and Methods of Economics", in Feigl and Brodbeck, p. 751. On professional ethics related to the use of knowledge, see Alvin W. Gouldner, "Anti-Minotaur: The Myth of a Value-Free Sociology", in Maurice Stern and Arthur Vidich, editors, Sociology on Trial, Englewood Cliffs: Prentice-Hall, 1963, p. 42.

7. Mercer, p. 14; Dobey, p. 118.

8. Edward H. Shils, "Sociological Inquiry and the Autonomy of the Individual", in Daniel Lerner, editor, The Human Meaning of the Social Sciences (Meridian Paperback) Cleveland: World Publishing Company, 1962 ed., pp. 117-118.

9. Furfey, p. 515.

10. Furfey, pp. 516-517. For other assumptions of risk in choosing experimental design, see Charles Hyneman, The Study of Politics, The Present State of American Political Science, Urbana: University of Illinois Press, 1959, pp. 186-187.

11. John J. Honigmann, Culture and Personality, New York: Harper, 1954, p. 136. See also Project Social Studies Discipline Paper on Sociology, p. 7.

12. Robin M. Williams, Jr., American Society, A Sociological Interpretation, NewYork: Knopf, 1955 ed., p. 387. See also Albert Cohen, "The Study of Social Disorganization and Deviant Behavior", in Robert K. Merton, Leonard Broom and Leonard Cottrell, Jr., editors, Sociology Today, Problems and Prospects, New York: Basic Books, 1959, p. 480; J. O. Hertzler, American Social Institutions, Boston: Allyn and Bacon, 1961, p. 37; Lee J. Cronbach, Educational Psychology, New York: Harcourt, Brace, and World, 1963 ed., pp. 44-45; Mercer, p. 333.

13. Donald W. Oliver, "Educating Citizens for Responsible Individualism, 1960-1980", in Franklin Patterson, editor, Citizenship and a Free Society: Education for the Future, Thirtieth Yearbook of the National Council for the Social Studies, Washington: The Council, 1960, p. 208.

14. Gordon W. Alport, Becoming (Paperback), New Haven: Yale University Press, 1955, pp. 75-77; Lawrence K. Frank, "The Fundamental Needs of the Child", in Arthur P. Coladarci, editor, Educational Psychology, A Book of Readings, New York: Dryden, 1955, p. 497.

15. William M. McCord, "Mass Culture and the Individual", in Patterson, p. 196.

16. Leonard Broom and Philip Selznick, Sociology, New York: Harper & Row, 1963 ed., pp. 28-29.

17. Ibid., p. 29.

18. Robert E. Lane, Political Life, Glencoe: Free Press, 1959, pp. 166-169.

19. Merle Curti, The Social Ideas of American Educators, Part X of the Report of the Commission on the Social Studies, American Historical Association, New York: Scribners, 1943, p. 103.

20. Educational Policies Commission, The Unique Functions of Education in American Democracy, Washington: National Education Association, 1937, pp. 22, 33, 46; Broom and Selznick, p. 451; H. Otto Dahlke, Values in Culture and Classroom, New York: Harper, 1958, p. 59; George S. Counts, The Social Foundations of Education, Part IX of the Report of the Commission on the Social Studies, American Historical Association, New York; Scribners, 1934, pp. 27, 282.

21. Broom and Selznick, p. 456; Educational Policies Commission, The Purposes of Education in American Democracy, Washington: National Education Association, 1938, pp. 33, 90.

22. Robert J. Havighurst notes the importance of the peer group for development of personality and values in Human Development and Education, New York: Longmans, Green, 1953, pp. 55, 58, 62.

23. Curti, pp. 583, 586.

24. Havighurst, p. 30.

25. Clyde Kluckhohn, Mirror for Man, New York: Whittlesey House, McGraw Hill, 1949, p. 256.

26. Dahlke, pp. 253, 292.

27. W. T. Thomas and F. Znaniecki, The Polish Peasant in Europe and America, as quoted in Muzafer Sherif and Carolyn Sherif, An Outline of Social Psychology, New York: Harper, 1956 edition, p. 497.

28. Broom and Selznick, pp. 275-276. See also Robert M. W. Travers, Essentials of Learning, New York: Macmillan, 1963, p. 394.

29. Crombach, pp. 424-425; Travers, pp. 379, 385; Sherif and Sherif, pp. 542-543.

30. Project Social Studies Discipline Paper on Sociology, p. 12.

31. Saul B. Sells and David K. Trites, "Attitudes" in Chester W. Harris, editor, Encyclopedia of Educational Research, New York: Macmillan, 1960 edition, p. 111.

32. Sherif and Sherif, pp. 542-543; Travers points out that a study has shown that prisoners of war may lose their values if they are deprived of their ordinary relationships. See p. 383.

33. Herbert Hyman, Political Socialization, Glencoe: Free Press, 1959, pp. 98-99.

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35. Sherif and Sherif, pp. 541-543.

36. Hyman, pp. 99-100; Raymond G. Kuhlin, The Psychology of Adolescent Development, New York: Harper, 1952, pp. 289-290; Sherif and Sherif, pp. 642-643.

37. Hyman, pp. 100-101, 105.

38. See footnote 55 for references dealing with the comparative difficulty of shifting attitudes which are held strongly and those which are not strong.

39. Crombach, p. 446.

40. Hyman, p. 99. For changes in the group of people admired by adolescents of different age groups, see Kuhlin, pp. 432-433. In one study adolescents were asked to name the adults in the community whom they most admired

and wished to imitate. When these names were ranked, it was found that four of the top ten were teachers.

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43. Sherif and Sherif, pp. 547, 562.

44. George Robert Carlson, "A Study of the Effect of Reading Books About the Negro on the Racial Attitudes of a Group of Eleventh Grade Students in Northern Schools", Unpublished doctoral dissertation, Minneapolis: University of Minnesota, 1948, p. 305; Crombach, pp. 454-455.

45. Students are more likely to be involved and so interested in a topic if they see how this topic relates to their own lives and goals. The increased interest is also likely to lead to greater cognitive learning.

46. Sherif and Sherif, pp. 547-548; Gordon W. Alport, "The Role of Expectancy", in Hadley Cantril, editor, Tensions That Cause Wars, Urbana: University of Illinois Press, 1950, pp. 55-56; Muzafer Sherif and Hadley Cantril, The Psychology of Ego-Involvement, New York: Wiley, 1948, p. 374; Earl Raab and Jaeger Selznick, Major Social Problems, Evanston: Row, Peterson, & Co., 1961, p. 262.

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53. Edgar Dale, *Audio-Visual Methods in Teaching*, New York: Dryden, 1954 ed., p. 228.

54. Rose, p. 24; Crombach, p. 459; Traverse, pp. 379, 392.

55. Sherif and Sherif, p. 573; Stagner, p. 80.

56. This conclusion is implied by the results of studies on the effectiveness of one-sided versus two-sided presentations in preventing later shifts in attitude as the result of additional information running counter to the desired position. See Sherif and Sherif pp. 560-561, Crombach, pp. 452-453.

57. Crombach, pp. 450-451, Raab and Selznick, pp. 261-263.

58. Crombach, pp. 449-450; Carlson, p. 302.

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64. Remmers and Adler, p. 195.

65. Barbara Carter, "The Biggest Business in Town," *Reporter*, July 20, 1961, p. 31.

66. Teacher observed by one of staff members of Project Social Studies.

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1629

Background Paper

CONCEPTS, GENERALIZATIONS, AND THEORIES

Edith West

Scientists attempt to describe, order and explain the phenomena in their field. Most of them also hope to develop laws which will enable them to predict. Scientists describe and order their data by developing concepts which relate like things. They attempt to explain and predict by discovering relationships among concepts --relationships which hold true in many if not in all cases in which specified conditions are present. These generalizations can be used to explain isolated facts if these facts are instances of the phenomena explained by the generalizations.

Concepts

Conceptualizing is the process of categorizing.[1] A concept may represent a classification of such varied phenomena as things which can be seen, heard, felt, or smelled through the sense (e.g. mountains), processes which can be observed, either over a short period of time or over a long period of time (e.g. voting, manufacturing), processes which are inferred from phenomena which are observed (e.g. socialization), a specified relationship (e.g. marriage, society), a relationship which is defined operationally (e.g. length, temperature, I.Q., conservative), a normative characteristic (e.g. good, valued), constructs which must be inferred from things which can be observed 9e.g. motive, culture), idealized categories which do not really exist (e.g. folk society), empty categories which have never existed but which imagination tells us might exist at some time (e.g. women presidents or world government or a name applied to an idea for an invention) or empty categories which represent mere flights of fancy (e.g. leprechauns).

Categories do not include things which are exactly the same. No two mountains or revolutions or men are entirely alike. Categories are based upon those characteristics and attributes which are similar and which are essential to the classification. Unique aspects of events or things are temporarily ignored, and likenesses are emphasized. As Lazarsfeld and Rosenberg point out, "No science deals with its objects of study in their full concreteness. It selects certain of their properties and attempts to establish relations among them."[2]

Generalizations

Generalizations specify some relationship among two or more concepts.[3] Some people speak of generalizations which relate specified events of the past or of places. Unless sentences make these relationships through the application of a principle or law which holds in more than one case, the sentences are better defined as singular statements or propositions.[4] Generalizations may be probabilistic; that is, the relationship may hold in only a certain percentage of cases. Other generalizations may state relationships which are always true, given specified conditions. Some generalizations are true given the specified conditions of a particular culture; others might be universal or true in all cultures.

Probabilistic generalizations may include a statement of probability. At other times, such statistical evidence is lacking, and the statement may include such words as "tendency", "generally", or "usually". At times these reservations are omitted even though the social scientist does not believe the generalization to be universal; he thinks of all generalizations in the social sciences as only tendencies and so omits the words. Generalizations differ in terms of the certainty with which scientists state them. An hypothesis which has been tested over and over by many scientists in many different situations without being disproved, yields a generalization about which scientists feel much more sure than one which has been tested less widely. One of the marks of the scientist is that he holds knowledge to be tentative and is willing to revise his generalizations in the light of new evidence.

Generalizations vary in their ability to explain phenomena. For example, a specified correlation may always hold true, but one factor may not be causing the other; therefore the correlation does not explain the phenomena. The higher the level of the generalization, the larger the number of concepts which are related and the greater the explanatory and predictive value.

Theories

Some people classify all generalizations as theories, that is, as statements which are hypothetical, in that it is possible that at some future time the statements may be disproved. David Easton suggests three different levels of theories, depending upon their scope: singular generalizations, narrow-gauge theory, and broad-gauge or systematic theory. Singular generalizations which relate only two variables, he argues, should not really be called theories At least, they represent the "first-rung of theoretical thought". A narrow-gauge or synthetic theory represents a "set of interrelated propositions that are designed to synthesize the data contained in an unorganized body of singular generalizations". Such theories might be developed to explain the relationships among phenomena within one branch of a discipline. Easton defines broad-gauge or systematic theory as "the conceptual framework within which the whole discipline is cast". The theory relates the phenomena from all branches of the discipline into a coherent whole.[6]

Theories, whether narrow-gauge or broad-gauge, include axioms and a series of generalizations deduced from the axioms. From these generalizations the research worker deduces singular generalizations which are capable of empirical testing. If these singular generalizations are not disproved by research findings, the theory is supported; if they are disproved, the theory is disproved. Although the axioms are taken for granted in the theory, they are usually generalizations which have been tested empirically in the past.[7]

Theoretical generalizations, that is, those part of a theory or those deduced from a theory, are more significant than empirical generalizations which have been arrived at inductively. Brodbeck points out that we can "more confidently call a generalization a law if it is part of a theory. The generalizations serving as part of premises are laws because they permit the derivation, hence the prediction and explanation, of other laws.[8] Derived theoritical generalizations help to prove or disprove a broader theory which explains a much wider number of phenomena than explained by the singular generalizations themselves. Such generalizations are more important than empirical generalizations which, if tested, can explain only the restricted phenomena related by the generalization.[9]

Both narrow-gauge and broad-gauge theories serve many purposes. They guide research by indicating the main variables to be studied; these variables guide scientists in determining the relevance of facts. Theories also guide research by suggesting the most significant hypotheses for testing. Research aimed at testing a theory is more productive than other research because it helps prove or disprove an explanation for a larger number of phenomena. Research which is unrelated to any theoretical framework may provide interesting findings, but these findsings are hard to relate. Such findings have little cumulative effect; they remain isolated bits of knowledge, lacking coherence or the ability to relate and explain the many phenomena in the field. On the other hand, if a series of research studies are focused upon hypotheses derived from a theory, and if these hypotheses and thus the theory are not disproved, the theory can be accepted at least tentatively. Further research may disprove or qualify the theory. This has happened in the natural sciences. Or the theory may be integrated into a new, more comprehensive theory. Until then, the theory serves to relate the concepts of the field and to explain the phenomena studied.[10]

Social scientists do not claim to have developed fully-formalized, broad-gauge theories such as those in some of the natural sciences. Even economists, who come closest to this ideal, lack a fully-closed system in which they can identify and measure all of the variables which affect the economic system. The best developed theories in the social sciences are narrow-guage theories which organize data for specific segments of each discipline. Nevertheless, attemps of social scientists to develop partially-formalized theories for their fields as a whole mark an important trend in the disciplines today. These social scientists do not claim to be developing complete theories; rather they are attempting to identify the most important variables and relatationships among them, hoping that these partial theories will speed the collection of data needed to develop more complete theories at a later time.[11] Economists are also developing statistical devices to estimate the effect of "disturbance" of unidentified variables not contained in their theoretical system. This technique may spread to other social sciences at a later time.[12]

Interrelationships of Concepts, Generalizations, and Theories

It is obvious that concepts, generalizations, and theories are closely interrelated. Generalizations and theories are built up of specified relationships among concepts. Moreover, a new term or concept is developed to represent a newly discovered relationship among older concepts. For example, someone notes that a number of different categories have certain characteristics in common. He invents a new name to represent categories with these attributes (e. g. Groups such as families and friendship groups are characterized by intimate face-to-face relations. The term "primary group" was invented to refer to all groups with this characteristic.). Or a scientist discovers a causal explanation. He gives a name to this explanatory process or relationship, which is the concept which refers to all cases in which this process is taking place.[13] In this sense, the concept becomes a shorthand notation for an explanatory law. According to K. William Kapp, "our concepts and the theories we formulate with their aid enable us to relate and integrate what to common-sense observation may appear as disparate phenomena and as opposites. In some instances such concepts, and theories reconcile what has long been considered unrelated and disparate."[14] For example, the concept "sanction" relates the two opposite concepts of of "punishment" and "praise." The concept "emotion relates "hate" and "lov

The very manner in which concepts are defined, by statements indicating the attributes which distinguish this category from another, indicates the relationship between concepts and generalizations. (e. g. "Those groups whose values and activities are regarded very highly by the individual so that he tries to conduct himself according to their values are called his reference groups. ").[15] By knowing that some phenomenon falls within a certain category (that is, in an instance of a certain concept), one knows something about that phenomenon, that is, one knows certain generalizations about it. Thus generalizations are used to define all but perhaps the most experiential concepts (e. g. blue) and also to relate these concepts to other concepts.

Usefulness of Concepts

Concepts are useful for a variety of reasons. Bruner, in his volume on A Study of Thinking, cites five ways in which categories are helpful. First, categorizing "reduces the complexity of the environment". Second, categories are the "means by which objects of the world about us are identified". Third, categorizing "reduces the necessity of constant learning". Fourth, categories are important because of the "direction" they provide "for instrumental activity"; that is, they permit a person to "know in advance about appropriate and inappropriate activities to be taken" because of what one knows about the category. And finally, categorizing "permits for ordering and relating classes of events", not just individual events and so makes possible the development of explanatory laws.[16]

In other words, concepts enable one to use past experiences, direct or vicarious, to examine the world with some understanding. If each event or object were seen as having nothing in common with any other event or object, the world would be bewildering. We would have to face each new object or event as though it were entirely new; nothing we had learned about past objects or events would be of help to us. If, however, we can group objects or situations as having something in common with other objects and situations about which we know something, we can apply what we know about these other objects and situations to the new ones. If we recognize something as an example of a certain concept, we know certain things about the phenomena and so know better what to expect from a situation and how to handle it.

Furthermore, concepts may give investigators hunches. Because scientists are so used to using a concept in explaining data, they are likely to ask if some new phenomena may not fall within the category of this concept. Or they may get a hunch that they can throw some explanatory light upon an old subject of investigation by examining it as a possible example of a category or concept which has never been applied to it before. For example, the concept of role applied to legislative behavior has given political scientists new insight into political behavior.

Thus concepts serve to focus our attention upon certain things; they serve to screen what we observe.[17] Indeed, we are unlikely to notice certain things for which we have no concepts. As Vernon Van Dyke points out, "people do not ordinarily look for something without having reason to think that it exists." Once someone sees a new way of categorizing phenomena and describes and names the category, "many others become aware of its existence and are likely to perceive it."[18] Thus the concepts of a field tend to identify the data of the field. No one can ever examine all of the facts of a situation. The facts of a discipline are those which are relevant to the concepts of the discipline and so to the questions posed by men in the field.[19]

Social science concepts, then, can be thought of as tools used by social scientists to gain new knowledge in their fields as well as tools by which they and the ordinary person can help make sense out of their social environment.

Difficulty of Concepts

Curriculum builders need to assess the difficulty of concepts, even though they can make only gross judgements. The relative difficulty of concepts at any one grade level is related to the comparative time needed (or number of instances which must be studied) to learn them. Or it could be measured by the number of children at one grade level who can learn them within a given period of time. The actual assessment of difficulty, however, is not so easy as it appears. What may be difficult for one group of children may not be difficult for another, because of differences in their experiences. The concept "mining" will be much easier for children in a small coal mining town than for those in an agricultural community. On the other hand, farm children in some areas should find it easier than children in a mining town to learn the concept "irrigation".

Despite these problems, curriculum workers should make rough estimates of the relative difficulty of concepts by considering the factors related to concept difficulty. (See Chart #1.) From the standpoint of the individual, concepts range in difficulty from those related to his direct experiences to those unrelated to either his direct or vicarious experiences. Concepts range in difficulty from those representing concrete observable objects (such as "tree") to those representing abstractions (such as motive).[2] Concepts range in scope from those referring to some narrow classification of phenomena to those which group a wide range of phenomena. The scope may be of a hierarchial order; that is, one concept may subsume unde it a great many other concepts (e. g. "primary group" has wider scope and is more difficult than "family"). A concept also has a wider scope than a concept which it relates to another concept (e. g. "mining" has a wider scope than "coal"). Although there are exceptions, concepts of wide scope tend to be more difficult than those of narrow scope. Concepts also tend to range in difficulty depending upon their certainty. Those whose defining attributes are always present (e. g. "tariff") are probably easier to understand than those for which at least one attribute is present only part of the time (e. g. "Negro").[21] Concepts range in difficulty in terms of openendedness, that is in the degree to which scientists have been able to define the terms so that there is agreement among scientists as to the boundaries of the categories and so agreement in the use of the concept in identifying phenomena (e. g. "democracy" is more openended and less reliable than "marriage").[22] Bruner suggests that there is evidence that concepts which are disjunctive may be more difficult than concepts which are conjunctive. That is, a concept for a class which includes either one attribute or another (e. g. "citizen") is more difficult to learn than a concept which represents a category defined by the joint presence of several attributes (e. g. "voter").[23] By and large, relational concepts are also more difficult than conjunctive concepts; that is, it is easier to distinguish a class by the joint presence of several attributes than by a ratio or product or other specified relationship between several attributes (e. g. "voter" is easier to understand than "gross national product"). Concepts are also difficult for students to learn if the ideas about the characteristics are in conflict with past learning (i. e. "socialization" as used in sociology and anthropology is a difficult concept for those who have learned to associate the word with socialism or the taking over of industry by government. "Race" is a difficult concept if pupils have absorbed inaccurate ideas about race from adults in their family or community).

Although all of these factors are related to the difficulty of concepts, no one factor can be used as a satisfactory criterion. A concept such as "animal" is of broader scope than the concept "ghnu" (one type of animal); yet "animal" is probably easier for an American to learn because it refers to things which he has seen and had contact. On the other hand, even though each child has a "self", he is unlikely to understand this concept as easily as another such as "dust storm" which he may have experienced only vicariously by viewing a film. The concept "self" is probably also harder for the young child than the concept "democracy", which is openended but which he can begin to understand rather early because of experiences which he and his classmates have related explicitly to the term. In using Chart #1, therefore, it is essential to keep all criteria in mind.

Knowing something about the difficulty of concepts does not provide an answer to grade placement. Concepts which seem very difficult given their most sophisticated definition, can be taught at a much less sophisticated level in the early grades. A young child cnn learn that a culture is "a unique way of life". Later he can learn that it is "a learned way of life", and gradually he can become more specific in defining "way of life". As long as he is not taught something which must be unlearned later, he can be introduced to a concept in simplified form in the lower grades without interfering with later learning.

Nevertheless, knowing something about the difficulty of concepts does provide some guidance. First, curriculum builders must provide many direct and vicarious experiences for those concepts which are difficult. Second, the curriculum builder should limit the number of difficult concepts introduced within a brief period of time. Third, the curriculum builder must decide how many concepts of narrower scope must be understood prior to teaching a higher level concept which relates them. How many concepts must the pupil learn, for example, before he can be taught the concepts of "mountain pass", "harbor", or "region" in geography? Of "stratification" or "self" in sociology? Of "market" or "real income" in economics? Of "century" or "generation" in history? Of "interest group" or "constitution" in political science? Of "enculturation" or "modal personality" in anthropology? Finally, the curriculum builder must decide whether or not a difficult concept is significant enough to warrant teaching it inearlygrades when it might be taught more quickly at a higher grade level beacuse of the types of experiences which most American children have had by the time they reach that grade.

Chart 1 -- DIFFICULTY OF CONCEPTS

These criteria must be considered together, not separately.

Criteria of Difficulty	Scale of Difficulty		
	Easy	More Difficult	Very Difficult
Distance from child's experience	Within direct experience	Within vicarious experience	Unrelated to past direct or vicarious experience
Distance from observed referrents	Referrents are phenomena which can be perceived through senses Physical objects Relationships: Specified; Defined Operationally Processes	Referrents are idealized types which do not exist in actuality	Referrents are phenomena which must be inferred from observations of other phenomena. (constructs) Predispositions Configurations Processes
Scope of Concepts	Narrow scope Few concepts subsumed under it Relates few concepts	Broader scope	Very broad scope Many concepts subsumed under it Relates many concepts
Certainty of presence of defining attributes	Always present		Tendency
Openendedness of concepts	Closed and so reliable	Not completely closed; somewhat unreliable	Openended; vague boundaries; unreliable
Way in which attributes of concept are related	Conjunctive (joint presence of several attributes)	Disjunctive (presence of one or another attribute)	Relational Specified relationship (ratio, product, verbal Comparative One attribute affects another All attributes interact

The most significant concepts are those which are related to the largest number of different concepts and which are used in explanatory generalizations.[24] Concepts which are of wide scope, abstract, and relational rather than conjunctive are generally the more useful tools for the social scientist. Frequently, the most significant concepts represent the key variables in a field. Scientists try out and discard a number of concepts which prove of little value to them in explanation. Phenomena can be grouped in innumerable ways, but only some ways prove of explanatory value in any discipline. For example, social scientists and biologists could group human beings by eye color rather than by sex; but eye color is not a significant variable whereas sex is for both disciplines. Consequently, the concept of sex is of significance and will be retained by the disciplines. Some categories are of value to one discipline but not to another. Sociologists are not concerned about metabolism as they analyze the actions of a group of men; other scientists, however, might be concerned with the metabolism of these men rather than with their social roles. As Bruner points out, the test of concepts, (that is, their significance) "is the predictive benefits that result from the use of invented categories".[25] Chart #2 indicates the factors affecting the significance of concepts.

Chart 2

IMPORTANCE OR SIGNIFICANCE OF CONCEPTS

Importance determined by following criteria:

1. What is the scope of the concept? (i. e. How many concepts are subsumed under it or related to it?)
2. How many generalizations relate the concept to other concepts?
3. How significant are the generalizations which use the concepts?
    - (a) To what degree are they explanatory and predictive?
    - (b) Are they empirical generalizations, theoretical generalizations, or part of a narrow or broad gauge theory?

Scale of Significance

Unimportant	Of More Importance	Of Great Importance
Limited Scope	Broader Scope	Very Broad Scope
Few generalizations using concept	A number of generalizations using concept	Many generalizations using concept
Generalizations using concept of little significance: (a) Non-explanatory or predictive (b) Empirical	Generalizations using concept of some significance: (a) Explanatory (and probabilistic) (b) Theoretical	Generalizations using concept of great significance: (a) Explanatory and predictive (b) Part of a narrow or broad gauge theory

Concepts, Generalizations, Theories, and the Curriculum

Those aspects of knowledge which are most crucial in any discipline are the conceptual tools, generalizations, and theories which can be used to help men explain and predict and to obtain new knowledge. Consequently, the social studies curriculum should be devised to help pupils understand the most significant concepts, generalizations, and theories in each of the disciplines.

Once the most significant concepts have been identified and defined, the generalizations which define and relate them to other concepts need to be identified and arranged in order of difficulty. This involves identifying concepts which are subsumed under or related by the key concepts. The curriculum builder can then attempt to develop a curriculum which introduces the easier ideas about concepts at earlier levels and adds more and more difficult ideas about them at later levels. If this is accomplished for each major concept, the curriculum will include the most significant generalizations in the field and will provide pupils with some knowledge of a structure of the field (i.e. the ways in which concepts and generalizations are related to each other.) At the highest grade levels, pupils can begin to understand some of the current debate about conflicting theories in each field.

The key concepts of the disciplines have been identified in most of the background papers on the disciplines. The paper on "Economics", however, is merely a reaction paper to the National Task Force on Economic Education report on Economic Education in the Schools (New York: Committee for Economic Development, 1961). This report identifies key concepts in economics and has been used heavily by the staff of this curriculum project. The background paper on "History" describes the field of history but does not attempt to identify specific historical concepts, since the field draws upon the concepts of other disciplines. Those concepts which are common to many of the social science disciplines are described in the background paper on "Implications of the Lack of Conceptual Integration in the Social Sciences."

In order to facilitate efforts to provide sequential development of ideas about key concepts, use has been made of needle-sort punch cards. Each major generalization related to a concept was typed on the front of a card; supporting, subordinate generalizations were typed on the back of the card. After the curricular framework was developed, penciled notations were made in front of each subordinate generalization to indicate in which units it might be introduced and reinforced. Some changes were made as units were developed and tried out in the schools. Original penciled notations were changed, but efforts were made to be sure that the changes did not lead to overlooking an important generalization or concept as different staff writers proceeded with their work. The cards have been referred to over and over again in order to make sure that certain concepts and generali-

zations are introduced in a number of places in the curriculum through different content and that the curriculum provides for a sequence in difficulty of generalizations about different concepts.

FOOTNOTES

1. May Brodbeck, "Logic and Scientific Method in Research on Teaching", in N. L. Gage, editor, *Handbook of Research on Teaching*, Chicago: Rand McNally & Co., 1963, pp. 45-51. See also Lee J. Cronbach, *Educational Psychology*, New York: Harcourt, Brace & Co., 1954, p. 281; O. J. Harvey, David E. Hunt, and Harold M. Schweder, *Conceptual Systems and Personality Organization*, New York: John Wiley & Sons, Inc., 1961, p. 10; Earl B. Hunt, *Concept Learning: An Information Processing Problem*, New York: John Wiley & Sons, 1962, p. 1. Categories and concepts are also used almost interchangeably in Jerome S. Bruner, Jacqueline J. Goodnow, and George A. Austin, *A Study of Thinking* (paperback edition), New York: Science Editions, Inc., 1962. David Easton in *The Political System, An Inquiry Into the State of Political Science* (New York: Alfred A. Knopf, 1963) uses the term concept in similar fashion although not defining it explicity. See especially p. 113 in which he criticizes one concept in common use because "It defines by specifying instances of particular phenomena rather than by describing their general properties" and because "It does not serve to identify the properties of a phenomena that give the latter a political quality". See also pp. 44-45, 98, 129-134.

   Carl Hemple in *Fundamentals of Concept Formation in Empirical Science* (International Encyclopedia of United Science, Volume II, No. 7), distinguishes between three types of concepts: classificatory, comparative, and quantitative. Comparative and quantitative concepts, according to Hemple, provide "for a gradual transition from cases where the characteristic it represents is nearly or entirely absent to others where it is very marked". Quantitative concepts are concepts which are defined operationally by the way in which they are measured (e.g. length, temperature, time) or which are mathematical relationships (e.g. velocity). Comparative concepts are those which indicate more or less of some characteristic but not in numerical terms (e.g. hard, soft). (See Hempel, pp. 54-57.) However, comparative and quantitative concepts still indicate the presence of some characteristic which is different from some other characteristic. Length has different attributes than temperature or even area. Hardness, even if present only to a relative degree, refers to some characteristic which differs from temperature. Thus it is possible to think of all concepts as categories representing phenomena with specified characteristics.

2. *The Language of Social Research*, Glencoe: The Free Press of Glencoe, 1962, p. 15.

3. Brodbeck, p. 56. See also Cronbach, p. 294; William A. Brownell and Gordon Hendrickson, "How Children Learn Information, Concepts, and Generalizations", in *Learning and Instruction*, The Forty-Ninth Yearbook of the National Society for the Study of Education, Part I, Chicago: University of Chicago Press, 1950, pp. 117-118.

4. For use of these terms see: Ernest Nagel, "The Logic of Historical Analysis' in Herbert Feigl and May Brodbeck, editors, Readings in the Philosophy of Science, New York: Appleton-Century-Crofts, Inc., 1953, p. 688; N.S. Timasheff, "Order, Causality, Conjuncture", in Llewellyn Gross, editor, Symposium on Sociological Theory, New York: Harper and Row, Publishers, 1959, p. 145; William Oliver Martin, "The Structure of Knowledge in the Social Sciences", Mimeographed Paper, Dept. of Philosophy, University of Rhode Island, pp. 10-11.

5. An interesting analysis of the validity of culture-bound social science generalizations and the possibilities of universal generalizations can be found in Easton, pp. 28-35.

6. Easton, pp. 55-57.

7. For example, see Brodbeck, 67-69; Easton, 58; Gustav Bergman, Philosophy of Science, Madison: University of Wisconsin Press, 1957, p. 78.

8. Brodbeck, p. 74. See also Easton, p. 62.

9. Caroline Rose, "Sociology", unpublished Project Discipline Paper, p. 3; Robert K. Merton, Social Theory and Social Structure, Glencoe: The Free Press of Glencoe, 1957 ed., pp. 95-98.

10. Talcott Parsons and Edward A. Shils, editors, Toward A General Theory of Action (paperback edition), New York: Harper and Row, 1962 edition, p. 3; Arnold Rose, editor, Human Behavior and Social Processes, Boston: Houghton Mifflin Company, 1962, p. viii; Brodbeck, p. 70.

11. For example, see Parsons and Shills, pp. 3-4; Arnold Rose, pp. x, 5; Richard Snyder, H. W. Bruck, and Burton Sapin, editors, Foreign Policy Decision Making, Glencoe: Free Press, 1962, pp. 25-26, 31.

12. Brodbeck, pp. 80-81.

13. Brodbeck, pp. 59-62.

14. Toward A Science of Man in Society, The Hague: Martinus Nijhoff, 1961, p. 126.

15. Caroline Rose, p. 22.

16. Bruner, A Study of Thinking, pp. 11-13. Bruner defines a concept as "the network of inferences that are or may be set into play by an act of categorization". p. 224.

17. Merton, p. 91; Harvey, Hunt, and Schweder, pp. 2-3.

18. Political Science: A Philosophical Analysis, Stanford: Stanford University Press, 1960, p. 64. See also John Doby, editor, An Introduction to Social Research, Harrisburg: The Stackpole Company, 1954, pp. 25-26.

19. A discussion of the need of "orienting concepts to help define the boundaries of political science" is found in Easton, pp. 92-93.

20. J. McV. Hunt, Intelligence and Experience, New York: Ronald Press Company, 1961, p. 281; Harvey, Hunt, and Schroeder, p. 22.

21. Bruner, pp. 200, 210-215, 228.

22. Openended concepts are described by Brodbeck, pp. 53-54.

23. Bruner, pp. 43, 180, 245.

24. Brodbeck, pp. 57-58.

25. Bruner, p. 7. See also Merton, p. 90.

1630

Background Paper

LEARNING PRINCIPLES

William Gardner and Vincent Rogers

Although the organization and development of a curriculum must be based solidly on an analysis of the significant ideas and concepts that comprise the disciplines under study, the final selection of content and the teaching techniques and materials employed must be based also on an analysis of educational research dealing with both the learning process and the characteristics, interests, and abilities of children. Much emphasis is placed upon the wide differences of opinion among learning psychologists and among theories of learning; seldom is equal attention given to the principles or assumptions upon which substantial agreement exists. While differences often appear to be wide, there are areas of commonality and agreement which can be identified and enumerated.

Reviewing and listing completely the areas of agreement among those who study learning would be virtually impossible and certainly inappropriate here. Rather, this paper will list and discuss several basic principles of learning which are particularly appropriate to social studies education and related to social studies objectives.

1. Social studies content is learned best when presented in meaningful contexts.

Although little controversy will take place over this broadly stated principle, quarrels will arise when an attempt is made to define "meaningful contexts." To be useful, this principle needs to be more carefully specified; in building a curriculum, two fundamental ideas need to be kept constantly in mind.

a. A meaningful context is one in which the student is stimulated to react to whatever content he is studying.

Various teaching strategies have been developed to describe situations where students can be led to interact with content. The most widely publicized concept or strategy is Jerome Bruner's discovery--the discovery of the "regularities of previously recognized relationships and similarities between ideas."[1] Unfortunately, Bruner's discussion of this concept is not completely clear and social studies specialists have done little as yet in developing illustrations of how this concept may be used.[2] Nor are the many illustrations from mathematics particularly helpful, since they seem to equate discovery with revelation rather than with a more specific strategy. Nonetheless, learning psychologists are high in their praise of discovery,[3] and one could hold out hope of its application in social studies.

Another strategy centers around the idea of controversy; topics concerned with the controversial issues in society are placed in the curriculum in the hope that students will become involved personally. The content may center around various aspects of well recognized present-day social problems[4] (i. e. medicare, recognition of Red China, race relations) or it may center in areas of American life which have been closed to examination by the general public (sex and morality, some aspects of economics, and so on).[5]

A third strategy could be called confrontation. Under this strategy, a student or class is continually forced to take a stand and to defend that stand in logical fashion in what has been described as a Socratic dialogue with the teacher. Oliver,[6] for example, has constructed sets of materials for a "jurisprudential" curriculum which focuses upon "the earnest use of free speech and open debate for the students to determine what is man's proper relationship to his government." Part of Oliver's mode of presentation consists of this dilemma case which dramatizes the basic conflict and is usually handled "within a Socratic framework; that is, the teacher identifies which horn of the dilemma expresses a 'solution' of the problem for particular students and then presses the students to take into account the unpleasant legal or empirical consequences of this solution."

Still another strategy is involvement. The student has a question of fair magnitude to answer from a field of study (i. e. What were the causes of World War I? What is revealed about American life by the periodic assasinations of presidents? What are the main geographic problems of the Upper Midwest?). He is directed to come to a conclusion about the problem on the basis of a relatively wide and intensive search in available materials. Obviously, secondary school students will not be able to answer such broad questions with any degree of sophistication, but different students will come to different conclusions and in the process will view social studies content as being composed, partially at least, of interesting and stimulating problems.

These four strategies are closely related, differing only in focus. Their use in curriculum development centers around the selection of content, the assumption being that some content is more appropriate to the construction of situations which will stimulate emotional involvement with the content.

b. A meaningful context is one in which new learning is related to concrete experience.

A favorite cliche in educational literature is the phrase "concrete experiences". Often, this wholesome notion is construed as meaning the teaching of "things" in preference to the teaching of "symbols"-- an inaccurate and even anti-intellectual interpretation.[8] Concreteness actually implies that new concepts and ideas be related to something already in the experience of the students. Meaning cannot be attached merely by using language (i.e. reading and talking) about social phenomena; rather, meaning is developed when the learner sees clearly the relationship of a new verbal symbol to ones he already possesses or to concrete reality with which he is acquainted.

The materials produced by a curriculum project should provide for many simple and varied illustrations of each new concept, idea, or skill. Several illustrations are needed because of differences in pupils' experiences. Simple illustrations are appropriate because they are likely to draw upon concepts already known by students. Using a wide variety of types of illustrations should help assure the widest possible transfer to new situations.[9]

2. Learning in social studies is facilitated by the development of various types of thinking processes. These processes, rather than rote learning, constitute the most important social studies goals.

"Tasks of thinking" are frequently stated as appropriate educational objectives but are as frequently ignored in practice. Teaching which encourages rote memorization is far easier than that which emphasizes thought processes. But the difficulty of such teaching alone cannot account for its lack of practice. Often it is assumed that pupils cannot think until a certain chronological or mental age is reached. In addition, many teachers are not informed as to the types of thought processes recommended and the techniques for encouraging them. Insufficient attention by curriculum developers to these processes has also led to lack of attention to thinking processes.

Despite the difficulties involved, a curriculum development project must plan for an emphasis upon thought processes. Usually, these processes are grouped into four categories.

a. Categorizing

Regardless of the topic taught or the age level of the learner, experiences in categorizing data ought to be built into the social studies program. This process (which could be thought of as organizing or ordering data) is an important one in the analysis of social science data. The work of Bruner,[10] Taba,[11] Hazlitt[12] and others indicates that school children at all grade levels can begin to develop this essential process.

b. Generalizing

Regardless of the topic taught or the age level of the learner, experiences in generalizing ought to be built into the social studies program. Generalizing may be broadly defined as the ability to deduce relationships which may exist between two or more concepts. The first grader who recognizes that trucks, trains, ships and airplanes "all make it easier for people to go from one place to another" is generalizing, as is the senior high student who sees that the depression of the thirties resulted from many social, political, and economic forces. While little evidence exists as to the possible effects of practice upon children's abilities to generalize, several studies do suggest that children can improve this ability through practice (Suchman,[13] Grener and Raths,[14] Bloom[15]).

c. Evaluating

Regardless of the topic taught or the age level of the learner, experiences in evaluating data ought to be built into the social studies program. The term evaluating includes much of what has often been listed in more specific terms under "critical thinking". It has to do with establishing the reliability, the validity, and credibility of various kinds of data, assessing the effects of a variety of possible biases, distinguishing between fact and opinion, and so on. Studies by Fahey,[16] Brown,[17] Bloom and Broder,[18] and others indicate the need for improving evaluative thinking skills at all grade levels. A number of other studies support the idea that practice in evaluative thinking produces improved performance at both elementary and secondary school levels.[19]

d. Hypothesizing

Regardless of the topic taught or the age level of the learner, experiences in hypothesizing ought to be built into the program. The importance of making "intuitive leaps" or intelligent guesses having to do with possible explanations of social phenomena cannot be underestimated if one is attempting to deal with the methods of the social scientist. This process is closely related to what is sometimes called creative or imaginative thinking, and research by Deutsche,[20] McAndrew,[21] and Torrance[22] among others, amply supports the feasibility of developing these methods of thinking at all grade levels.

The research findings regarding these four modes or types of thinking can be summarized as follows:

(a.) There is no single, clear-cut age of reason that must be attained before complex thinking processes appear; the ability to think exists in some children as early as age three and in most by age six.

(b.) The acquisition of a large number of facts does not guarantee that one will become a productive thinker who effectively uses the thought processes described above. A constant dose of ready-made answers to questions and solutions to problems appears to discourage the development of more complex thinking strategies.

(c.) There have been many instances in which individuals have developed exceedingly complex thinking skills despite tremendous gaps in their background and training. Nevertheless, it seems quite probable that for most of us rational powers do not develop instinctively; training is necessary. The most effective way to develop the thinking procedures outlined above is in the context of real, meaningful problem situations suggested by the content of the social studies curriculum rather than through sets of isolated "exercises".

(d.) Success in developing more complex thinking strategies will depend in part on the child's motivation. He should feel that the problem with which he is faced is related to his interests.

(e.) Since the development of more complex thinking processes involves a number of abilities, it is important to use a wide range of concrete, verbal and other materials in an instructional program. A wide variety of "stimuli" is needed, as is a wide variety of approaches or methods.

(f.) It is difficult to imagine creative, evaluative and other more complex thinking procedures being developed in classrooms that are overly rigid, overly controlled or in general dominated by the teacher. Neither does it appear likely that an atmosphere of fear or threat is suitable for their development.

(g.) As currently measured on the more commonly used tests, intelligence is not necessarily an accurate gauge of a given child's ability to profit from experiences involving a variety of thinking procedures.

3. Learning is facilitated when topics are taught in depth rather than covered in breadth.

The widely publicized fetish of "ground-covering" in social studies courses has been condemned sufficiently, and no extensive discussion of that issue is needed here. Fundamental agreement exists among social scientists and social studies educators that depth is preferable to breadth.[23]

As yet, however, no precise definition for depth exists. Too often in practice, it means either the wholesale amputation of content from a course without regard to significance or the wholesale addition of data of minor importance or both. The junior high school course in American history is a good illustration of these practices. This course in many schools is now called a "depth" course, since it covers American history only to 1876; presumably the senior high course picks up the story at that point and carries it to its dramatic conclusion. All too frequently, the additional time is used to teach the student longer lists of names, dates, and places; the depth concept is perceived in terms of the quantity of data to be learned.

Confining a course to the coverage of prescribed years or topics may have value as such, but depth implies much more than mere amputation or accretion of data. As the curriculum for each year is planned, three criteria should be considered: first, topics considered of most importance must be given priority and topics of lesser importance should be slighted or ignored; second, sufficient time must be allotted for a thorough treatment of important topics; and third, the increased time available should be used to teach toward a wider range of objectives (skill development, critical thinking, and so on) than would otherwise be possible.

4. Attitudinal learning may be facilitated by careful identification of the specific attitude to be developed and by the construction of situations considered advantageous for attitude change.

As the Project paper on values indicates, the school plays a significant role in creating or altering attitudes. The problem for the teacher is to see what things he can do which may affect the attitudes of his students. One writer recently put the problem this way:

> Education and society are in many cases concerned with making learners want things, which, if left to themselves, they would not normally seek, such as interest in good government, intellectual integrity, economic welfare of others, and the like. How does one, in effect, attach plus signs to such aims. . . .

Several factors complicate the attachment of this "plus sign". While attitude formation takes place basically in the same manner as cognitive learning does, subtle factors related to personality make attitude development more perplexing to teachers than the development of understandings or skills. Students will vary greatly in their reactions to classroom stimuli. Teachers have no adequate methods to assess the various degrees of "readiness" for attitude development in a single class.

Although huge problems complicate the development of attitudes, the task is not an impossible one. Teachers interested in changing attitudes should keep in mind several fundamental guidelines.

a. Attitudes may be more readily developed and/or changed in relatively young children. The older the individual in general, the more rigid his attitudes. Moreover, the younger the child, the greater the influence of adult models on the development of attitudes. It seems apparent that the elementary school teacher, usually second in status and influence only to a child's parents, has a crucial role to play in attitude formation.

b. Since the importance of the peer group increases with age, attitude formation in older pupils is more effective when approached through group processes. This involves an emphasis upon discussion; indeed, evidence exists that even undirected class discussion will result in attitude change.[25]

c. Since attitudes are based upon emotions, change is dependent upon an appeal to feelings.[26] The use of dramatic events, case studies, and episodes in which the student is required to put himself in the position of another are effective ways of appealing to emotions.

d. Students will more readily accept attitudinal change when they feel they have had the opportunity to decide for themselves.[27] This suggests that they be provided realistic experiences with questions and situations which they may discuss and that the teacher refrain from trying to influence attitudinal choice overtly.

5. Learning is facilitated when differences among learners are recognized and attempts are made to teach different pupils differently.

One of the early contributions of educational psychology was to establish that people learn in different ways and at different rates. Despite the wide recognition of these facts, easily workable techniques for providing for individual differences have not been developed to a high degree of precision.

Ideally, individual differences should be handled (and exploited) through individual instruction. Some individualized instruction is possible in a typical classroom arrangement, but, generally speaking, the teacher-pupil ratio is such that little can be accomplished in this fashion. The non-graded school in which pupils supposedly can move at their own pace may prove effective,[28] but as yet it is not a wide spread innovation.

Another device considered promising by some educators is the programmed learning-automatic teaching approach. While this approach has proved useful in some school subjects, the programs currently available in social studies subjects are few in number and generally of poor quality.[29] It would seem that wide application of programmed instruction to social studies education will not be made in the near future.

Homogeneous or ability grouping has been used to an increasing degree to allow for individual differences. Research evidence as to the relative merits of homogeneous and heterogeneous grouping is bulky but inconclusive.[30] While homogeneous grouping may be justified for a number of reasons, it is necessary to keep in mind that even among "homogeneous" classes, wide ranges of ability are found in characteristics crucial to learning. No system of grouping, it seems, is alone sufficient in providing for the differences among learners.

The most feasible method of handling these differences is to provide diversified activities and experiences through a unit organization. Although the use of units has become widespread, the function of the unit to provide for individual differences is often ignored. Units prepared by a curriculum project must contain several activities designed to teach each major idea of the unit. Provision for individual differences may always be done imperfectly, but by becoming acquainted with the individual differences present in any classroom and by having access to a diverse group of learning activities, a teacher may at least approximate individualized instruction.

6. Learning is more readily transferred when the learner sees a new situation as essentially similar to a situation with which he is familiar. Teaching method, rather than subject taught, determines what is transferred.

The great quantity of research on transfer of learning over the past several decades has greatly altered previous notions about this important phenomenon. Briefly, current thought among learning psychologists rejects both the gross transfer notions of faculty psychology and the "identical elements" theory in favor of a middle ground.[31] According to these theories, transfer is possible on a fairly broad scale and, moreover, all types of learning outcomes (skills, generalizations, and attitudes) will transfer insofar as the context is taught with transfer in mind.

Current notions about transfer center around the method of presentation. As Cronbach says, "What is... transferred depends upon the teaching method; the same subject taught differently may produce great or little transfer."[32] The single method to be used is defined largely in terms of any technique which will lead to intellectual development, operational thought, understanding, or the attachment of meaning.

Equally significant in teaching for transfer is the arrangement of key ideas and concepts in sequence so that the same idea or concept is met by the student at different times. In his challenging analysis of the learning process, Bruner implies strongly that specific aspects of structure must be introduced early and then re-presented later.[34] Cronbach is more explicit when he discusses the "cumulative" nature of knowledge as learned by the student.[35] In summarizing several ideas related to sequence, he emphasizes that the "curriculum should provide repeated opportunities to deal with the most significant general concepts," and that the key ("operational") concepts have an inherent order which can be determined by the process used by the student as he learns the concepts.[36]

It should be noted that the comments of Bruner and Cronbach are rather broad inferences from a limited amount of research. Nonetheless, the tendency among psychologists to emphasize sequence is strong enough to justify tentative acceptance of the principle for curriculum development.

The implications, then, for a curriculum development project of the research and recommendations regarding transfer are primarily two: first, the teaching methods and emphases discussed earlier in this paper (discovery and thinking processes) should be used as often as possible; and, second, any curriculum ought to contain a sequence of the most significant ideas and concepts in the various disciplines.

The six principles discussed here are neither conclusive nor inclusive. Their main function may well be to suggest factors associated with the learning process which must be considered in planning a curriculum. None of the principles is capable of being stated precisely in the form of immutable "laws"; yet, in total, they can serve as a substitute for the unsophisticated notion or the conventional folklore about learning which so often dominates classroom activities.

FOOTNOTES

1. Jerome Bruner, The Process of Education, Cambridge: Harvard University Press, P. 20.

2. Bruner's illustration of discovery in operation in social studies leaves much to be desired. It is difficult to see how the incident described there (p. 21) could lead to an understanding of an "established relationship" in the field of geography.

3. Although cautionary notes on discovery are made by some reviewers; for example, "Altogether it should be emphasized, however, that the belief in the superiority of discovery... over traditional teaching still rests more on intuitive conviction than on well-established experimental generalizations." Jan Smedslund, "Educational Psychology," in P. R. Farnsworth, ed., Annual Review of Psychology, 1964, Palo Alto: Annual Reviews, Inc., p. 273.

4. For various points of view and discussions of the problems approach see G. L. Fersh, R. E. Gross, and R. H. Muessig, eds., The Problems Approach and the Social Studies, Curriculum Series Number Nine, Washington, D. C.: The National Council for the Social Studies, 1960; Dorothy Fraser and Edith West, Social Studies in Secondary Schools, New York: Ronald Press, 1961, Chapter 13.

5. Maurice P. Hunt and Lawrence E. Metcalf, Teaching High School Social Studies, New York: Harper and Brothers, 1955, Chapters 11-16.

6. Donald W. Oliver, "Educating Citizens for Responsible Individualism," in Citizenship and a Free Society: Education for the Future, Thirtieth Yearbook of the National Council for the Social Studies, Washington, D. C.: The Council, 1960, pp. 201-227.

7. Ibid., p. 221. Oliver and Shaver recently reported the results of broad scale experimentation comparing groups taught by the Socratic method with groups which studied the same material without being pressed to defend a value position. (James P. Shaver and Ronald W. Oliver, "Teaching Students to Analyze Public Controversy: A Curriculum Project Report," Social Education, Vol. 28, No. 4, April, 1964.) No differences

were found between the experimental and control groups. The writers comment that an "explicit conceptual framework i.e., significant problems may well be more important than the particular 'style' used by the teacher."

8. John Dewey, How We Think, Boston: D. C. Heath, 1933.

9. James L. Mursell, Successful Teaching, New York: McGraw Hill, 1954, Chapter 3. For an excellent discussion of this point, see Ernest Horn, Methods of Instruction in the Social Studies, New York: Charles Scribner's Sons, 1937, Chapter IV.

10. Jerome Bruner, Jacqueline J. Goodnow, and George A. Austin, A Study of Thinking, New York: Wiley, 1956.

11. Hilda Taba, "Thought Processes and Teaching Strategies in Elementary Social Studies." (Paper presented to the American Education Research Association, Chicago, February 17, 1962.)

12. V. Hazlitt, "Children's Thinking," British Journal of Psychology, Vol. 20, 1930, pp. 354-361. See also D. Layton, "An Exploratory Study of Primary Grade Children's Ability to Conceptualize Based Upon Content Drawn from Selected Social Studies Topics," (Unpublished master's thesis, The University of Minnesota, Minneapolis, 1964.)

13. R. Suchman, The Elementary School Training Program in Scientific Inquiry. (Mimeographed, Urbana: University of Illinois, 1962).

14. N. Grener and L. E. Raths, "Thinking in Grade IV," Educational Research Bulletin, Ohio State University, Vol. 24, 1945.

15. B. S. Bloom, "Some Results of a Study of Conscious Thought Processes in Classroom Situations," American Psychologist, Vol. 6, 1951.

16. G. L. Fahe, "The Questioning Activity of Children," Journal of Genetic Psychology, Vol. 60, 1942.

17. C. T. Broun, "An Experimental Diagnosis of Thinking on Controversial Issues," Speech Monograph, Vol. 17, 1950.

18. Benjamin S. Bloom and Lois J. Broder, Problem Solving Processes of College Students, Supplementary Educational Monographs, No. 73, Chicago: University of Chicago Press, 1950.

19. See, for instance, C. H. Boeck, "Teaching Chemistry for Scientific Method and Attitude Development," Journal of Experimental Education, Vol. 19, 1951, pp. 274-253; C. V. Higgins, "The Educability of Adolescents in Inductive Ability," Science Education, Vol. 22, 1945, pp. 82-85;

Arno Jewett, "Detecting and Analyzing Propaganda," English Journal, Vol. 29, 1940, pp. 104-115.

20. J. M. Deutsche, "The Development of Children's Concepts of Causal Relations," The University of Minnesota Institute of Child Welfare Monograph, No. 13, 1937.

21. M. B. McAndrew, "An Experimental Investigation of Young Children's Ideas of Causality," Studies of Psychology and Psychiatry: Catholic University of America, Vol. 6, 1943, No. 2.

22. Paul Torrance, "Current Research in the Nature of Creative Talent," Journal of Counseling Psychology, Vol. 6, 1959, pp. 309-316.

23. For a review of related literature and description of a teaching experiment, see Fred Johnson, "Depth Versus Breadth in Teaching American History to High School Students," Unpublished Ph. D. Dissertation, University of Minnesota, 1961. Typical of opinion on the depth-breadth question is Joseph R. Strayer, "History," in The Social Studies and the Social Sciences, New York: Harcourt, Brace, and World, Inc., 1962.

24. George W. Hartman, "Interests, Attitudes and Ideals," in Charles W. Skinner, editor, Educational Psychology, Vol. 49, 1958, pp. 224-228.

25. K. Nutte and J. B. Biggs, "Attitude Change Through Undirected Group Discussion," Journal of Educational Psychology, Vol. 49, 1958, pp. 224-228.

26. Glenn M. Blair, R. Stewart Jones, and Ray H. Simpson, Educational Psychology, Second edition, New York: Macmillan, 1962, Chapter 8.

27. Ibid.; see also Chester W. Harris, ed., Encyclopedia of Educational Research, New York: Macmillan, 1960, pp. 102-112.

28. John I. Goodlad and Robert H. Anderson, The Non-Graded Elementary School, Rev. ed., New York: Harcourt, Brace, and World, 1963.

29. See, for example, the programs for social studies listed in Programs '63, Washington D. C.: U. S. Government Printing Office, 1963, pp. 702-742.

30. See Harris, op. cit., pp. 221-225.

31. Robert F. Grose and Robert C. Birney, eds., Transfer of Learning, Princeton: D. VanNostrand Co., Inc., 1963, (Paperback); Lee S. Cronbach, Educational Psychology, Second edition, New York: Harcourt, Brace, 1963, Chapters 10 and 11; Blair, Jones, and Simpson, op. cit., Chapters 9 and 10; J. Bruner, Process of Education.

32. Cronbach, op. cit., p. 346.

33. Ibid., Chapter 10.

34. Bruner, Process of Education, pp. 26-27.

35. Cronbach, op. cit., pp. 340-341.

36. Ibid., p. 341.

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THE SOCIAL SCIENCE DISCIPLINES

Edith West

Disciplines Defined

A discipline is a field of study, an organized body of information, and a method of inquiry combined. The field of study refers to the data studied and the types of questions asked by practitioners in the discipline. Disciplines may differ obviously in the data studied. Meteorologists, for example, study weather, while economists study the production and distribution of goods and services. Frequently the things studied may not look so dissimilar at first glance, even though the aspects of things studied differ. Although both biologists and sociologists study men, their data differ. The biologist is interested in man as an organism; the sociologist is interested in how men behave in groups. In other words, the data of a field and so its boundaries are really defined by the questions asked by practitioners in the field.[1] Van Dyke illustrates this point by pointing out the many kinds of data which might be collected about the House of Representatives. Scientists could collect data about the physical condition of members of the House. For example, they could study members' hearts, metabolism, skin or hair color, eyesight, or hearing. Others might be interested in their clothes, the food they eat, or their grammar. Still others could collect data about the House Chamber such as its size or furnishings or cleanliness. All of these facts could be collected. All would be related in one way or another to the House of Representatives which is part of the political system. Yet this relationship, notes Van Dyke, does not make them "facts of political science." If political scientists were to study all possible facts related to all parts of the political system, "political science might be reduced to an attempt to determine how many of the socks worn by Congressmen (or by voters) have holes in the toes."[2]

SO 003 170

A discipline includes an organized body of knowledge. This body of knowledge consists of far more than an accumulation of facts. Unless facts are grouped to show their relationships, they are of little help in explaining events. Facts are classified under group names or concepts. Any fact, then, is an instance of a concept.[3] Instances of many concepts may be related by singular propositions as in historical explanation of past events. Or whole categories may be related by generalizations or laws. The structure of a field refers to the way in which facts and concepts are related. In those disciplines aimed at prediction, the structure includes the concepts, generalizations, and theories of the field.[4]

A discipline includes a method of inquiry. The method may be that of empiricism as in the sciences, of logic as in mathematics, or revelation as in religion, of artistic imagination as in the arts, or of a combination of several of these methods. Each discipline has also developed a set of tools or techniques to use in carrying out the general method of inquiry. Just as the natural scientists have developed specialized techniques of measurement to make possible more precise observations, social scientists have developed tools such as scales, inventories, and sampling devices to improve the reliability of their observations. Although a number of empirical sciences use some techniques in common, each is likely to develop other specialized techniques because of the type of data studied and the questions asked. Sciences dealing with human behavior, for example, must use sampling techniques because human behavior is variable in a way unlike the chemical properties studied by the chemists. Only the sociologists and social psychologists among social scientists can conduct controlled experiments. Political scientists have learned to use techniques such as Guttman scaling in analyzing legislative roll-call votes. Economists have developed elaborate techniques for mathematical analysis. Anthropologists, on the other hand, find it difficult to use many quantitative techniques and rely heavily upon participant observers to record careful observations and describe the configurations of a culture. Since events cannot be relived, historians are forced to rely upon careful documentary analysis. Geographers, on the other hand, who are more interested in location, make heavy use of mapping techniques to identify areal relationships among different phenomena.[5] In the sense that the concepts of a field focus and direct inquiry, these concepts are tools of inquiry and differ from one discipline to another.[6]

Disciplines are changing constantly. They change as new information is added to the body of knowledge. This information may be discovered by extending the field of investigation to more examples of old types of data. The archaeologist unearths new data about a past civilization. The sociologist studies a new social movement. An anthropoligist visits a different culture or revisits one he studied years before. The geographer continues to study the same regions to note changes, while the historian studies events which have just taken place. The political scientist analyzes political behavior and the economist the economy of underdeveloped nations, areas largely ignored by these disciplines in the past. Additional information is discovered as new concepts direct attention to different data. Anthropologists, for example, opened up whole new fields of research by applying psychoanalytical concepts to their study of ways in which different cultures produced different modal personalities.[7] Political scientists used such new concepts as "influence" and "socialization" to open up new areas of study.[8] Disciplines also change as new theories are developed to guide research and to organize and explain phenomena. The development of new techniques also makes possible better controlled observations, better analysis of data, and even the collection and analysis of data which was formerly thought beyond the power of the discipline to study. For example, modern computers have made it possible for scientists to analyze vast quantities of data mathematically. The technique of simulation, using computers, has opened up the possibilities of a new type of quasi-experiment.[9]

In recent years the social sciences, like the natural sciences, have been undergoing rapid changes. Political science has been revolutionized by a change in perspective, that is, in the questions asked. Sociologists have developed new theories to guide investigations and codify their knowledge. National income statistics and econometrics, by providing new tools of analysis, have enabled economists to sharpen their theories and their ability to explain and predict. Geographers, too, have developed new statistical tools of analysis as well as new mapping techniques. The use of social science concepts in analyzing historical data has led to revised historical interpretations. Anthropologists have widened their field of study to non-primitive cultures. These are only a few indications of the changes which have taken place, changes which have outmoded much that is being taught in social studies.

Clearly, there is and probably cannot be any one structure for a social science discipline. Structures are developed by practitioners of the discipline and change as men gain new knowledge. Moreover, at any one time there is likely to be some disagreement about the structure of a field. In their attempt to expand knowledge, men have developed different theories to help explain and predict. These theories lead to different ways of organizing concepts and generalizations. However, frequently there is agreement on the importance of certain concepts as analytical tools. Moreover, there may be fairly common acceptance of certain generalizations.

The discipline papers prepared by this Curriculum Center delimit the boundaries of a discipline, present a current conceptual framework or structure, and identify the method of inquiry and some of the techniques used for expanding knowledge in the discipline. Some analyze conflicting theories in the field. The remainder of this paper attempts to put these papers into the perspective of the social sciences as a broad division of study.

Data of the Social Sciences

The social sciences deal with social data, that is, with data related to man's behavior in relationship with other men. The natural sciences study different aspects of the physical world, including man as a physical organism. Social scientists deal with man as a social being, that is, man in groups.

Social phenomena cannot be explained purely in terms of man as a physical organism, that is, in biological and psychological terms.[10] Men are always in groups and develop patterned ways of behaving as a result of living in these groups. Whether a social scientist assumes some basic, universal patterns as a result of group living or whether he assumes constant change and therefore patterned regularities only within specific cultures in particular eras, he accepts the idea that discernable patterns are due to group living, not to biological considerations. Social scientists recognize the fact that man's physiology affects his social behavior, but his physiology alone cannot account for his behavior in relationship with other men.

Scientists who attempt to develop explanatory laws assume some regularity or uniformity in the real world, an order which can be discerned by man. Although all members of a society do not act in exactly the same way, there is enough commonality to their actions to make tenable the assumption that group culture structures behavior to a considerable degree. Social scientists study social data, that is, men's interactions, in an attempt to discern these patterned behaviors.[11]

The social and natural sciences are not separated neatly, however, with no overlapping. Some of the social sciences are partly social, partly natural sciences. One branch of anthropology, for example, deals with the development of man as a physical being and with physical variations among men. Nevertheless, anthropology is classified as a social science because more of its branches deal with social data. Geography, too, is part natural, part social science. The geographer studies the physical environment of an area and draws upon data from the other natural sciences to help him describe regions. His prime interest, however, is in the areal association of different types of natural and human phenomena--in the ways in which men have interacted with their environment to make the region different from other regions. Consequently, geography is usually classified today as a social science.

Anthropology and geography are not the only social sciences to use data or generalizations from the natural sciences. Sociologists, although primarily interested in the study of society and men's interactions, cannot ignore the fact that man is a physical being; they must take into consideration data from both biology and psychology. Hunger is a physiological state; the ways in which man satisfies his hunger or the effects of hunger on man's social actions are social data. The sociologist, however, must be aware of the physiological makeup of men which may affect social actions. Historians, too, must consider data from the natural sciences as, for example, data about the natural environment in which events took place.

The Social Sciences As Sciences

Social scientists themselves disagree as to whether or not the social sciences should be called sciences. Many historians, for example, prefer to think of history as a humanity. A number of political scientists have been fighting the trend toward making political science more scientific. Those who reject the idea of the social sciences as true sciences usually do so because they compare the social sciences with the natural sciences. After defining science in terms of rigid requirements met only by the most advanced natural sciences, they find the social sciences wanting.

What is a science? The older, less rigorous definition of a science requires only a classified body of knowledge which has been authenticated by a precise, empirical method.[12] More commonly, additional qualifications are added. Many people would classify disciplines as sciences only if they seek to develop generalizations and theories which have predictive value.[13] Others, on the other hand, would call a discipline a science if it uses the method of empiricism and seeks to explain, even if only unique situations.[14] A few scientists insist that only those disciplines which can use the careful controls of experimentation to verify their findings are truly scientific. Some would also insist that a science must have a "coherent body of theoretical generalizations into which all new research is integrated".[15] And Haring distinguishes between the exact and the inexact sciences in terms of whether or not explanatory laws can be expressed by equations, and quantities can be substituted for every term in the equations.[16]

Obviously, not all disciplines are sciences. Music, for example, is a discipline but falls within the area of the arts; both its methods and its purposes are unscientific.

If the older, less-limiting definition of science is used, all of the social sciences can be classified as sciences. Each has an organized body of knowledge, even though not all of it has been verified to the same extent as most data and generalizations in the natural sciences. Each of the social sciences uses the empirical method to at least some degree and has developed techniques to make precise observations.

Nevertheless, because of the data with which they deal, the social sciences do not and perhaps can never approach some of the natural sciences in the development of verified, predictive theories. Most of the natural sciences can use experiments to study cause-effect relationships. With the possibilities of greater control over variables, experiments provide greater verification than is possible in non-experimental research. Moreover, natural scientists can replicate experiments or make repeated observations of phenomena in order to confirm findings. To some, this possibility of replication is crucial to the scientific method which requires objectivity, doubt, and a willingness to search for data to disprove hypotheses.[17] Controlled experimentation is difficult if not impossible in most of the social science disciplines. Human beings cannot be experimented with at the whim of social scientists. Even those willing to subject themselves to experimentation cannot be used in replicating experiments because they learn or are changed by the original experiments. Natural scientists, on the other hand, can use equivalent objects with the same chemical or physical properties. Thus they can be sure that they are not introducing new uncontrolled variables. Human beings are not uniform. All that the social scientist can hope to do in replicating research is to obtain groups as nearly like the original group as possible. Even when random samples of the population are used, the statistical error in findings is likely to exceed that in experiments in the more exact sciences. Furthermore, it is difficult to control all but one variable in experiments with human beings. The very fact that people are being used in an experiment introduces a new variable because of the psychological effects of increased attention to the research subjects.[18]

As a result of difficulties in conducting experiments, the social scientist must depend heavily upon both direct and indirect observations of social phenomena as they occur. He cannot go back to check his observations, because the phenomena are in a constant process of change. Historical events are never repeated, and people's behavior is modified by each new experience. Many observations must always be indirect. The historian, for example, must depend upon scattered observations in eye-witness accounts of past periods. The documents available may be both sketchy and unrepresentative. The sociologist who wishes to study people's attitudes and reactions to events must depend either upon what these people tell them (orally or in writing) or upon inferences from observed behavior.[19]

Thus far social scientists lack the clear-cut terminology and exact techniques of measurement possessed by natural scientists. Most social science concepts have not yet been quantified, although social scientists are making progress in developing scales and other measuring techniques. Economists have gone the furthest in developing quantitative concepts and mathematical equations to represent laws of behavior. The lack of reliable concepts and quantifications in the other fields makes it difficult to obtain reliable results and so hampers the development and verification of predictive theories.[20]

Social scientists face another, more serious difficulty in their efforts to develop a body of knowledge which can be used to explain and predict. Regularities in social behavior result primarily from shared culture. This culture is always in the process of change, even though it may exhibit a great degree of continuity. Explanatory generalizations based upon the conditions in one society or era may be useless in another.[21] As is true of generalizations in the natural sciences, the invariant or probablistic relationship between different phenomena holds true only under specified conditions.

Unfortunately, the crucial cultural variables necessary for the social science generalization to hold true are usually accepted as given and not specified. In part this failure results from the tendency of some social scientists to assume that certain types of behavior, particularly motives, are universal rather than culturally derived.[22] More important, perhaps, is the recognition both of the extreme difficulty of isolating the effects of all variables operating within a society, and the marked degree of relative persistance of basic cultural traits.[23] Thus, rather than rejecting all hope of developing useful knowledge about social behavior, many social scientists have studied social behavior within a single culture, hoping that the generalizations which they develop will be useful in prediction within that culture, at least in probabilistic terms, for many years to come.[24]

Thus most generalizations in the social sciences are at present culture-bound.[25] As long as the crucial cultural elements necessary for the relationship to hold true do not disappear from the culture, the generalizations will remain useful for the society in which they were developed. By chance, they may be applicable to other cultures or past eras which despite major differences of other kinds, include these essential cultural elements within their cultural configuration.

Attempts to identify the essential cultural conditions necessary for valid social science generalizations, requires both cross-cultural studies and the use of historical data. Even then, the task is formidable and some think it impossible. It is a task, however, to which a growing number of social scientists are turning.[26]

Perhaps easier, although still difficult, is the attempt to develop social science generalizations applicable to all societies. Such generalizations would describe uniformities which seem to be inevitable consequences of physiological man living in groups. For example, anthropologists have attempted to identify a few broad categories of behavior in such terms as "universals" or "functional prerequisites of society".[27] Others have tried to identify key analytical concepts to express causal relationships which they think must exist in all societies. They often test the validity of their hypotheses by using these concepts to analyze social phenomena in different cultures.[28] For example, the concept of role has been used successfully to explain why there are regularities of behavior in any society. The concept may be of little value in predicting specific behavior; but it does help explain how the behavior pattern developed, and it has proved useful in many of the social science disciplines.

It is not surprising that the social science disciplines are less advanced than the natural sciences in the development of predictive laws and unifying theoretical frameworks. The social scientist deals with phenomena of far greater complexity and variability. Even his attempts at explanation and prediction may affect the data he studies.[29] Compared with the natural scientist, he must deal with many more variables at any one time. Innumerable factors interact and may even serve as counteracting forces in ways as yet, and perhaps never, subject to accurate mathematical probabilities.[30] Nevertheless, social scientists have developed generalizations which help men explain and even predict behavior more reliably than they could by mere guesswork.

Several of the social sciences do not focus upon the development of explanatory generalizations, although they are interested in explanation. Most historians and geographers try to explain unique configurations such as particular eras, events, or places. They are sometimes called ideographic sciences in contrast to nomothetic sciences which attempt to develop explanatory laws.[31] The historian may make educated guesses about the future on the basis of past trends or his interpretation of somewhat analogous situations in the past. According to the Committee on Historiography of the Social Science Research Council: "In certain and limited cases...by the use of historical knowledge and analogies, the historian may, in respect of given situations, indicate various contingencies, one or more of which may be anticipated with a high degree of probability."[32] Geographers are more likely than historians to develop statements of tendencies in human behavior. However, few historians and only a minority of the geographers in this country are guided in their work by the major goal of developing generalizations with predictive value.

The social sciences are not the only sciences failing to meet all of the criteria which some people specify as essentials of a science. Meterology is much less accurate in its predictions than some sciences, in part because it must take into consideration many more variables. If controlled experimentation is established as a requisite of science, astronomy is excluded, even though it is one of the most exact sciences in terms of its ability to predict. Nor do some of the other natural sciences rely entirely upon experimentation. Darwin's theory of evolution was based upon careful observations, and this theory was modified by other observations, not experiments. Many aspects of biology have been built up by observation rather than through experimentation.

Moreover, some of the most fruitful theories in the exact sciences have resulted from inferences from observed behavior of physical phenomena.[33] In their early stages of development, the natural sciences, too, lacked unifying theories, yet they were not considered unscientific. Perhaps it is the "unending quest" through empirical methods, whatever the techniques, for greater and greater verification of knowledge which is the essential ingredient of any science. The criteria of science, explains one philosopher of science, are "ideals to be approximated, but perhaps never fully attained".[34]

The sciences may be thought of as on a continuum from those satisfying only minimal scientific criteria to those satisfying almost all of them. Just as the natural sciences would be spread out over much of this continuum, so would the social sciences. Indeed history would fall partly on the continuum and partly off it in the area of the humanities. History "is scientific", writes Feigl, "to the extent that it ascertains its facts concerning past events by a meticulous scrutiny of present evidence".[35] History also consists of an organized body of data, not a mere accumulation of facts. However, the techniques for ordering and interpreting this data are part science, part art. To the extent that historians establish hypotheses and test them by examining available facts, they are being scientific. To the extent that they use conceptual tools and generalizations from the social sciences, they are being scientific. Their use of common sense explanations, however, their lack of interest in developing explanatory laws, and their concern for narrative history as a form of literature place history to some extent outside of the orbit of science. The other social sciences would fall somewhat higher on the scientific continuum.

Although the complexity and variability of social behavior may prevent the social sciences from ever reaching levels of prediction possible in the natural sciences, progress is evident. At the present time social sciences are going through a period of self-searching and ferment, as men experiment with different conceptual tools, try out different theoretical frameworks which might serve as stepping stones to more advanced deductive theories and develop more precise techniques for observation and analysis of data.[36] Every science must pursue its quest for verifiable knowledge by the best empirical techniques available for the type of data studied, and it must constantly search for better techniques of observation and analysis. Every science must consider its generalizations and theories tentative, subject to revision in the light of new evidence. No more can be expected from any science than that it constantly strive to "make its knowledge as reliable as is humanly and technically possible."[37]

The Social Sciences Differentiated[38]

The social sciences lack clear-cut boundaries ma[illegible] one discipline from another. Indeed, both sociology and anthropology are sometimes called the sciences of left-overs, because they have undertaken the study of phenomena seemingly within the boundaries of other disciplines but neglected by them. Most of the early work on political socialization, for example, was done by sociologists rather than political scientists. Anthropologists, to cite another illustration, are almost alone in studying the economic behavior in primitive societies. Sociology and cultural anthropology are so nearly alike in so many concepts and purposes that to some members of these disciplines the distinguishing feature between them is that the sociologist has studied complex societies of the West, while the anthropologist has focused upon primitive cultures. Even this division is disappearing as anthropologists extend their study to highly complex civilizations. Political scientists and economists have both studied relationships between government and the economic system, and political science courses on international relations include material on economic relations among countries. Many other points of overlap could be cited.[39]

Nevertheless, the social science disciplines do tend to study different types of social data or at least to ask different types of questions about the phenomena studied. History is the study of man's actions and changes in his actions in past periods. It "is the study of the unique configuration of events in time and their change over time".[40] The historian is interested in when something happened, while at times the anthropologist is interested only in the fact that a certain culture trait has existed.[41] When other social scientists use historical data, they usually do so to test the validity of generalizations in their own fields or to determine the conditions necessary for their generalizations to hold true. To the extent that members of these other disciplines write about the historical backgrounds of phenomena in their fields, using genetic explanations to explain present conditions, they are writing history, not political science, or sociology, or economics. To the extent that historians step out of their role of explaining unique configurations of past events, and predict trends or the results of present-day actions, they are assuming the role of political scientists, sociologists, or economists.[42].

Geography is the study of differences among regions and the particular interrelations between men and their environment which make each region unique. Geographers may use historical data to show how a region has changed from one period to another, but the purpose is to explain the region, not past events. Geographers may also draw upon the fields of cultural anthropology or comparative government and economics, but the purpose is to explain the uniqueness of a region, not to describe the culture or explain how the economic or political system works.

In spite of many similarities, anthropology and sociology differ considerably in practice. Anthropology is the study of man in his totality as a physical and a social being. Unlike economists and political scientists, anthropologists believe that particular institutions cannot be understood without reference to their place in the total cultural configuration. Thus they study societies as a whole, including economic and political institutions, although they do not try to develop economic and political theories to fit each group they study. They also attempt to discover the effect of culture upon personality. Sociology is also the study of society, of its social organization and the effects of groups upon individual behavior. The sociologist, however, tends to specialize in the study of specific institutions or specific characteristics of society rather than looking at it as a whole. Moreover, most sociologists study only complex industrialized societies, usually their own. In the interest of division of labor and specialization, they also tend to leave the study of most aspects of economic and political institutions to specialists in other fields.[43] Anthropologists tend to study patterned norms or ideal behavior; sociologists usually studying their own or similar societies, are more likely to take norms for granted and to study ways in which people's behavior differs both within the range of behavior considered acceptable by the society and behavior which deviates from the norms. As Murdock points out, the sociologist is interested in differences in voting behavior of Americans. He studies voting turnout and the percentages of people who vote Republican or Democratic. On the other hand, "American voting habits to an anthropologist from a different culture would mean, first of all, such patterned practices as being transported to a polling place in a car provided by a political party's headquarters, checking with the registrars, and X-ing a ballot or pulling a lever on a voting machine."[44]

In addition to studying as many different societies as possible, including those of prehistoric man, anthropologists have studied man's evolution and physical variations among men. The eventual goal of anthropology is not just to provide a complete description of man's behavior in any one society or accurate physical measurements of any one group of people, although some anthropologists spend their lives preparing descriptive studies of just this kind. The goal of anthropology, however, is to develop greater understanding of human behavior in general. By comparing different societies, anthropologists discover the range of diversities possible in man's behavior patterns in all societies.[45] By using their knowledge of physical variations and similarities, they attempt to assess the effects of culture upon behavior. They also try to identify ways in which culture has effected changes in the physical evolution of man.[46] In addition to studying the process by which regularities in behavior develop in any society, anthropologists study factors leading to change and creating resistance to change.

Political science and economics are narrower in scope than the other social sciences. Each focuses upon only one aspect of the broader social system. The political scientist studies the political system, that is, the system by which the final authoritative decisions are made about which "interests, goals, and wants shall be enforced on and in society."[47] He is interested in all factors which affect these decisions as well as in the ways in which the decisions, in turn, affect the system itself. Thus the political scientist cannot ignore certain economic and social aspects of whatever society he is studying. His focus, however, is not the same as that of the economist, nor the same in most cases as that of the sociologist. The political scientist may study legislative decision-making, perhaps as it relates to tax laws; he will not concern himself with economic principles of taxation or with the effects of these laws upon the economic system. Or the political scientist may study family influences upon political attitudes; he will not study the family as an institution or the process by which attitudes are inculcated within a family. The political scientist may study the effects of prosperity or recession upon decisions of voters and legislators; he will not study the causes of these ups and downs of the business cycle.

Although many political scientists study only the political system of their own country, those in the field of comparative government study political systems of other countries as well. They may be interested in describing and explaining the political behavior of a particular country which seems interesting or important. To an increasing degree, those who study comparative government do so in the hope of discovering regularities and differences in political behavior as the basis for developing generalizations which are not culture bound. To this extent, political scientists cross over into the field of anthropology. In addition to using anthropological data, they study areas of the world without the structured governmental organizations found in the western world; consequently, they must study the society as a whole in order to identify ways in which other institutions assume the political function.[48]

Economists like political scientists, deal with only one aspect of society. They study that human behavior which involves production, consumption, and the exchange of goods and services.[49] These behaviors are interrelated in a systematic way, constituting a sub-system within the broader social system. The chief focus of economists is upon the mechanism by which resources are allocated to the production of goods and services and by which goods and services are allocated to consumers.

Until recently, economics has been more culture-bound than political science. The main body of economic theory attempts to explain economic systems of countries with market economies. As a result of the rise of communist and socialist economies in important nations of the world, some economists have turned to a study of comparative economics. Economists have left the study of economic systems in primitive groups to anthropologists.[50]

Social scientists from most of the disciplines differ more in the questions they ask than in the general phenomena studied. They might all be interested in a labor-management dispute such as a strike. However, the economist might ask: "What effect will this strike have upon production? upon workers' incomes? upon consumption?" Political scientists might ask: "What effect will this strike have upon voting behavior? upon legislation? upon the extension of the authority of government into new spheres of activity?" Sociologists might investigate the ways in which the union builds morale to sustain the strike or in the social controls exerted to keep the men in line. Anthropologists might study the strike as an example of normative behavior or a factor in social change, or they might be interested in the differing value structures of strikers and employers. Geographers might be concerned about the effect of the strike upon the economy of the region in which it occurred, or upon land use in the region if the strike were to lead to a movement of the industry to another location. At a later date, historians might study both the particular configuration of events which led to the strike and the events which resulted from it. The questions social scientists ask are also related to their goals. As was seen earlier, historians and geographers are ideographic sciences. Consequently, their questions about the strike are asked with the goal in mind of explaining unique events or regions. On the contrary, the other social sciences would be more interested in the strike as an example to help prove or disprove their generalizations, or as an opportunity to use their generalizations in prediction.

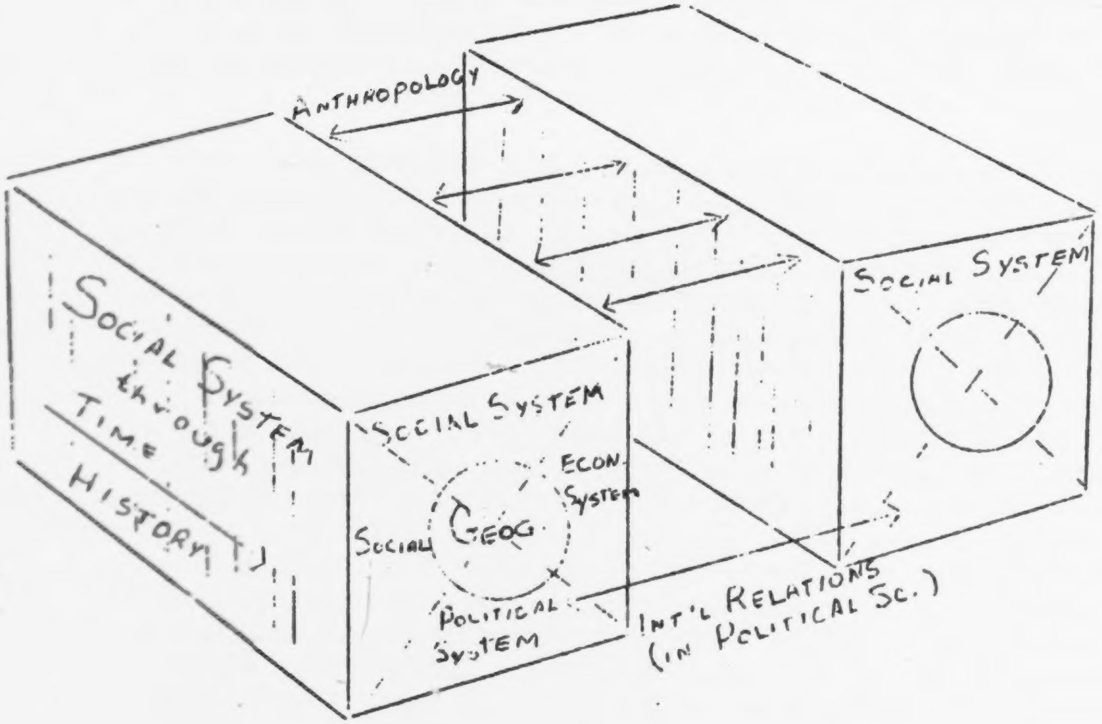
Interrelationships Among the Social Sciences

There are some who believe that the social sciences may eventually be incorporated into one overall science of man's behavior. Thus far, however, attempts to develop an integrated framework have proved unsuccessful. Certainly no overall arching theory unites all fields; this is not surprising since most of the individual disciplines lack theoretical frameworks to unify all of the phenomena within their own fields.

Nevertheless, the social sciences have much in common and complement each other. In this sense they do form a field of study. Social scientists all study social data--in many cases different aspects or even the same aspects of the same social phenomena. The ways in which the disciplines interrelate in the study of society can be illustrated in Chart #1.

Knowledge from each of the disciplines supplements that in the others. Each must consider variables studied by the others.[51] History is incomprehensible without an understanding of the location in which events took place. Differences in regions, on the other hand, cannot be explained without resort to differences in historical development. Economic developments are affected by political variables, just as political developments are affected by economic variables. As the different disciplines provide help to each other in assessing the effects of these variables, sources of error in explanation and prediction can be reduced. In part, this help can come through data collected by other fields. Economic data, for example, can help political scientists study political behavior, or sociologists study differences in social classes. Historical and anthropological data provide useful tests of the universality of generalizations in political science, economics, and sociology.[52] The disciplines can also obtain help from each other by using generalizations and concepts from the other fields. Historians and geographers, for example, need generalizations from economics, political science, sociology, and anthropology to explain past events or present-day regions.[53] The different disciplines employ many of the same concepts; indeed one of the trends within the social sciences is the borrowing of concepts from other social science disciplines in order to analyze data in new ways.[54]

Chart #1


ANTHROPOLOGY
SOCIAL SYSTEM through TIME
HISTORY
SOCIAL SYSTEM
ECON. SYSTEM
SOCIAL
GEOG.
POLITICAL SYSTEM
INT'L RELATIONS (IN POLITICAL SC.)
SOCIAL SYSTEM

Social scientists share a common empiricism. They make careful observations of data, attempting to reduce or eliminate the effect of bias upon the accuracy of observations, and they attempt to test hypotheses to the extent that it is possible to do so. True, economics is sometimes known as a deductive rather than an empirical science. However, empirical means are used to check hypotheses and assumptions and to gather data for use in predictions. The science is deductive in that the economists are further advanced than the other social sciences in working out a theoretical system from which they can deduce generalizations.

Although many of the empirical techniques used by social scientists differ, a number are used widely by several of the disciplines, and each discipline can learn from technical developments in other fields. Many social scientists use historical documents; they need to adopt the historian's techniques of documentory analysis if they are not to make errors. Social scientists have exchanged ideas about improving such devices as scaling techniques, questionnaires, and simulated experiments. The constant interchange of technical advances has been an important factor in recent developments within each field.[55]

Even the different types of explanation used in the social sciences co ment each other and are mutually beneficial. Historians and geographe a configurational approach to explain particular phenomena. The histori uses a genetic explanation to show the development of events over time. geographer studies configurations in their areal relationships. Both can use generalizations from other social sciences to help them explain par events or regions. Such generalizations are not sufficient, however, to plain situations which involve a unique mixture of many factors, includi personalities who happen to be in positions of influence.

Generalizations about human behavior can be used to predict probabil they are useful when considering human behavior in the aggregate but ar too accurate in predicting the behavior of any single individual. Gener from the social sciences cannot explain, for example, why a assassin a particular president, even though they might help explain why he com an act of agression. But by killing a president, this man may have alte considerably the conditions within his society. To a large degree differ in cultures and regions can be explained only on the basis of chance fac just as in science, some physical differences can be explained only by c mutations. The concepts of mutation and natural selection may explain physical differences among groups developed, but they cannot explain w particular mutation was of the type that it was. The behavior of men is lated to a large degree by the culture in which they live. Culture is inte ized in part through a process of role-taking, but each person perceive in slightly different ways and most societies permit considerable leaw the way in which he fills the role. Different perceptions of roles may c the culture.[56] Each individual's experiences are unique to some degr Given his particular experiences and intellectual abilities, a man may invention which will change society. Just why certain technological and innovations are made and not others, cannot be explained by social scie generalizations alone. Case studies of societies are just as important studies of individuals for purposes of explanation. Historical or geogra explanations resemble case studies: explanations are made by judging relative effects of many factors in their unique configuration. On the o hand, the geographer or historian who ignores generalizations from the sciences cannot hope to understand many of the causes of the things he to explain.[57]

Because of the complexity of human affairs, however, social scienti unable, at least at present, to develop laws to explain all behavior. Th not only examine each unique configuration of factors to see if the cond for a certain prediction are present, but they must at times combine the covering laws with a study of historical accidents and non-recurring ch to explain social behavior at a given time or place.

And finally, it should be noted that problems within any society are n neatly separated into political, economic, and social problems. As Eu points out, "Problems have a way of spilling over disciplinary boundari

Attempts to solve them in terms of a single discipline's concerns are likely to be partial and unsatisfactory."[58] The study of societal problems, therefore, requires interdisciplinary efforts.

The Social Sciences and the Curriculum

The social science curriculum cannot possibly include all of the scholarly materials which have been organized in each of the social science disciplines. There is not time for pupils to study all of these topics even in a superficial fashion. Moreover, some of the ideas may be too difficult. Some principles of selection must be established.

The most obvious principle is that the content selected should help achieve the goals established for the social studies program.[59] One of these goals is to teach pupils the key ideas which can help them understand man's behavior. It is important to identify, therefore, the most significant concepts and generalizations within each discipline and for the social sciences as a whole.[60] The identification of key concepts and generalizations, however, does not solve the problem of content selection. Many topics might be used to teach the same concept. Topics related to significant trends and persisting problems within our society should be given priority over those which deal with less crucial matters. The study of important issues will give pupils information they may well need as adults and will make them aware of ways in which conceptual tools and skills learned in the social sciences can be used in problems affecting their lives.

Content can also be selected because it is useful in teaching desired skills and attitudes. For example, pupils may be given eye-witness accounts of relatively insignificant but interesting events in order to give them practice in evaluating sources of information in terms of the bias and competency of authors. Content can be selected to provide pupils with opportunities to examine value-conflicts in our society in order to raise their own values to the level of consciousness and to develop greater consistency in their value patterns.

Including content dealing with the methods of inquiry in the social sciences should help develop both skills and attitudes. Pupils need to understand the problems facing the social scientist and the limitations of different techniques if they are to make realistic interpretations of social science data and develop a sceptical attitude toward the finality of conclusions. It is equally important to teach them that the social sciences are not based upon sheer guesswork or opinion. A lack of awareness of the empirical methods used gives people the idea that their guesses are as good as any conclusions of social scientists. Pupils need to learn that guesses and hypotheses have value, but that unverified guesses are not so good as tested theories. The general low repute of the social sciences may be due in part to misconceptions about their methods of inquiry. Greater familiarity with them should make pupils aware of the valuable role of the social sciences in the modern world. Pupils who study and use these techniques should also come to accept, at least to some degree, those values which are essential to the scientific endeavor.

In addition to selecting material in terms of the goals of the social studies program, the curriculum builder must consider two other criteria. First, is the content suited to the maturity level and abilities of pupils at each grade level? Even if the content can be taught at that level, is such teaching an efficient use of time? Can it be taught better and more quickly at another level? Are there other important topics which can be understood more easily? Is the content close enough to pupils' experiences and interests so that teaching it will have a positive rather than a negative effect upon interest in the social studies?[61] Second, does the content chosen to teach concepts and skills fit together at each grade level to form some kind of coherent theme of study? If pupils can see how different units studied during the year are related, they are more likely to organize information into meaningful structures than when the topics remain isolated in their minds.

The social science disciplines deserve to be grouped together in a balanced curriculum. Each is needed to help pupils understand man's behavior. The type of data studied, the complementary nature of both knowledge and types of explanation from the different disciplines, and the number of common concepts and empirical techniques combine to give a large degree of unity to the social sciences. The most significant concepts needed to explain data in different disciplines, can serve as threads of the curriculum, to be introduced and reinforced at different levels. Other concepts, important in single disciplines, can be taught in a number of grades, but perhaps with less emphasis and less frequently. Students should learn to identify the interrelationships among the disciplines in terms of data studied, and they should be taught the different types of questions asked by each discipline.

This does not imply that the different disciplines must be studied separately or always according to the logical organization used by the social scientist. Pupils cannot study too many different disciplines from all fields of knowledge. at one time. Nor can they study any one discipline in all of its complexity at the lower age levels; a discipline cannot be assigned to one grade and then forgotten. Although it is hoped that pupils will understand the basic structure of the discipline by the time they graduate from high school, it may be unwise either to introduce these structures at too early an age or to give them to pupils ready-made. Attempts to teach complicated structures that are not meaningful to pupils at that level, will result in little educational gain and perhaps in a blunting of interest which will make later educational efforts difficult. Some evidence exists that pupils are likely to develop greater interest and comprehension if they are allowed to discover relationships for themselves, rather than having these relationships pointed out to them. This so-called "discovery approach" does not fit in neatly with the logical development of the structure of a discipline as it exists in the mind of the social scientist.[62]

Pupils can be exposed to some topics and ideas without having key concepts or their relationships to a particular discipline made explicit. Such exposure may prepare them to study the discipline later. Some anthropologists, for example, believe that pupils need experiences with differences in ways of living in other parts of the world, before any attempt is made to have them study one culture in depth.[63] Pupils may be taught the meaning of concepts at different levels of complexity. In earlier grades, pupils might learn that culture is the way of life of a particular group of people. Later they may learn that the term is applied to any way of life of a group of people. At still later stages, pupils are ready to grasp the idea of culture as a system of interrelated elements. At each level of the curriculum, attempts can be made to increase the level of understanding of concepts, both by teaching pupils more generalizations relating these concepts to others and by teaching them more sophisticated definitions. Pupils can also be taught to fit past learning into concepts and theories of wider and wider scope. The structures of disciplines do not have to be imposed upon children all at one time.

It is probable that pupils should study materials from the disciplines in a variety of ways. It may well be that they should study some topics through an integrated approach without even attempting to distinguish the different disciplines; such an approach might focus upon common concepts. At other places in the curriculum, pupils may need to study different disciplines in a more orderly fashion. Disciplines such as history and geography may also be used as vehicles to teach many concepts and test generalizations from the other social sciences. Finally, pupils might profit from the experience of using the various disciplines in studying social problems which cut across fields. They might well analyze a problem, for example, in the light of the kinds of questions asked and the concepts and generalizations used in each of the disciplines. By combining different approaches to the disciplines, a curriculum should develop readiness for a more logical study of a field, obtain the advantages accruing from knowledge of a structure of a field and its methods of inquiry, and teach pupils to transfer skills and ideas learned from a discipline to problems which require an interdisciplinary attack.[64]

The Role of the Discipline Papers in This Curriculum Study

The Project Papers on the separate social science disciplines have been and will be used in a number of ways. Discussion of these papers has enabled the staff to identify points of similarity and note differences among the social sciences. The papers have been used in selecting major concepts and important topics to be included in the curriculum. The discipline papers served as points of departure for staff writers preparing resource units. They have been used to help teachers attending summer institutes obtain a better, more up-to-date understanding of each of the disciplines. Teachers who have a grasp of a structure of each discipline are less likely than others to give pupils misconceptions which must later be eradicated. They are more likely to be aware of opportunities to help pupils relate past learning to new and to organize information into patterns which will help them understand the structure of the disciplines. They are also more likely to take advantage of opportunities to help pupils see how the conceptual tools from one social science discipline can be used to advantage in others and in studying problems facing society. Teachers need a sophisticated knowledge of the social sciences if they are to do a good job of teaching even the easiest topics from these fields.

FOOTNOTES

1. David Easton, The Political System, An Inquiry Into the State of Political Science, New York: Alfred A. Knopf, 1963, pp. 103-105; Charles S. Hyneman, The Study of Politics, The Present State of American Political Science, Urbana: University of Illinois Press, 1959, pp. 21-22; Blaine E. Mercer, An Introduction to the Study of Society, New York: Harcourt, Brace & Co., 1958, p. 17.
2. Vernon Van Dyke, Political Science: A Philosophical Analysis, Stanford: Stanford University Press, 1960, pp. 58-59.
3. May Brodbeck, "Logic and Scientific Method in Research on Teaching", in N. L. Gage, editor, Handbook of Research on Teaching, Chicago: Rand, McNally & Company, 1963, p. 55.
4. Easton, p. 4. See also Project Paper on "Concepts, Generalizations, and Theories", p. 11.
5. See the various project papers on individual disciplines in the social sciences. Hyneman (pp. 22-23) cites the method of inquiry as the distinguishing characteristic between Learning Psychology and Epistomology.
6. See Project Paper on "Concepts, Generalizations, and Theories", p. 5.
7. Douglas G. Haring, "Anthropology: One Point of View", in Haring, editor, Personal Character and Cultural Milieu, Syracuse: Syracuse University Press, 1956, pp. 20-24.
8. See Project Paper on "Political Science," p. 4.
9. For example, see Harold Guetzkow, editor, Simulation in Social Science: Readings, Englewood Cliffs: Prentice-Hall, Inc., 1962; Richard C. Snyder, "Experimental Techniques and Political Analysis: Some Reflections in the Context of Concern over Behavioral Approaches", in James C. Charlesworth, editor, The Limits of Behavioralism in Political Science, Philadelphia: American Academy of Political and Social Science, 1962, pp. 103-104.

10. In the terms of philosophy, the social realm of facts is an emergent level, analytically and empirically separate from the biological and psychological levels and not reducible thereto. Although social scientists differ in their use of concepts to describe the patterns of behavior, they all recognize that human beings react to a large degree in similar ways because they share a common culture. The social level is emergent because social behavior cannot be explained in terms of man's physiological or chemical makeup. See Richard C. Sheldon, "Some Observations on Theory in Social Science", in Talcott Parsons and Edward A. Shils, editors, Toward a General Theory of Action, (paperback), New York: Harper & Row, 1962, p. 30; Arnold Rose, Sociology, The Study of Human Relations, New York: Alfred A. Knopf, 1956, pp. 21-22; Walter Goldschmidt, Man's Way, A Preface to the Understanding of Human Society, New York: Holt, Reinhart and Winston, Inc., 1959, pp. 29-30.

11. See the following references on scientific assumptions of social regularities in the real world: N. S. Timasheff, "Order, Causality, Conjuncture", in Llewellyn Gross, editor, Symposium on Sociological Theory, New York: Harpers, 1959, pp. 146-147, 159-161; Douglas G. Haring, "Science and Social Phenomena", in Haring, editor, Personal Character and Cultural Milieu, pp. 110-112; Sheldon, p. 38; Easton, pp. 11, 17; Hyneman, pp. 155, 157-159.

12. For example, see Evron M. Kirkpatrick, "The Impact of the Behavioral Approach on Traditional Political Science", in Austin Ranney, editor, Essays on the Behavioral Study of Politics, Urbana: University of Illinois Press, 1962, p. 3; Benjamin Ginzburg, "Science", in Encyclopedia of the Social Sciences, vol. 13, p. 591. This usage of the term "science" is a fairly typical one in dictionaries.

13. Robert Brown, Explanation in Social Science, Chicago: Aldine Publishing Company, 1963, p. 26; George A. Lundberg, Social Research, New York: Longmans, Green and Co., 1942, pp. 4-5; John J. Honigmann, Culture and Personality, New York: Harper & Brothers, 1954, p. 87; Rose, pp. 8-9; Adolf Grunbaum, "Causality and the Science of Human Behavior", in Herbert Feigl and May Brodbeck, editors, Readings in the Philosophy of Science, New York: Appleton-Century-Crofts, 1953, pp. 766-767.

14. For example, see Ernest Nagel's analysis of nomothetic and ideographic sciences, their purposes, and the role of singular and general propositions in both types, in "The Logic of Historical Analysis", in Feigl and Brodbeck, 688-689; Edward Hallett Carr, What is History? New York: Alfred A. Knopf, 1963, pp. 109-112.

15. Rose, p. 10.

16. Haring, "Science and Social Phenomena", p. 107.

17. The advantages of coincidental or replicated observations are described in Harold A. Larrabee, Reliable Knowledge, Boston: Houghton Mifflin Company, 1954, pp. 134-136. The value of an experiment as a means of developing a verified body of generalizations is discussed in John T. Doby, editor, An Introduction to Social Research, Harrisburg: Stackpole Company, 1954, pp. 101-117; Lundberg, p. 55.

18. Difficulties involved in experimenting with human beings are described in Doby, p. 118; Arnold Rose, Theory and Method in the Social Sciences, Minneapolis: University of Minnesota Press, 1954, pp. 257-280; Larrabee, pp. 492-493. See also Project Discipline Paper on "Political Science", pp. 9-10.

19. For the historian's problems in using observations reported in historical documents see Project Discipline Paper on "The Many Meanings of History", pp. 2-3. For a more general treatment of difficulties involved in observing social data, see Morris R. Cohen, "Reason in Social Science", in Feigl and Brodbeck, pp. 664, 667.

20. Problems of quantification in the social sciences are discussed in Lundberg, pp. 22-25; Anatol Rapoport, "Uses and Limitations of Mathematical Models in Social Science", in Gross, p. 348; Clyde Kluckhohn, "Common Humanity and Diverse Cultures", in Daniel Lerner, editor, The Human Meaning of the Social Sciences, Meridian Books Paperback, Cleveland: World Publishing Company, 1959, pp. 260, 266-267. For an analysis of the increasing uses of mathematics for both quantitative and qualitative analysis, see James C. Charlesworth, editor, Mathematics and the Social Sciences, Philadelphia: American Academy of Political and Social Sciences, 1963; Kenneth J. Arrow, "Mathematical Models in the Social Sciences", in Daniel Lerner and Harold D. Lasswell, editors, The Policy Sciences, Recent Developments in Scope and Method, Stanford: Stanford University Press, 1951, ch. 8.

21. Rose, Theory and Method in the Social Sciences, pp. 161-162; Easton, 31-33; David E. Apter, "Comparative Politics and Political Thought: Past Influences and Future Developments", in Harry Eckstein and David E. Apter, editors, Comparative Politics, A Reader, Glencoe: The Free Press of Glencoe, 1963, pp. 729-730.

22. Easton, p. 33; Haring, "Anthropology: One Point of View", pp. 10-11.

23. See Project Paper on Anthropology," p. 7; Feelix M. Keesing, Cultural Anthropology, The Science of Custom, New York: Rinehart & Company, Inc., 1959, p. 409.

24. S. Sidney Ulmer, editor, Introductory Readings in Political Behavior, Chicago: Rand McNally & Company, 1961, p. 3; Rose, Theory and Method in the Social Sciences, p. 260; Charles A. Beard, The Nature o

the Social Sciences, Part VII of the Report of the Commission on the Social Studies of the American Historical Association, New York: Charles Scribner's Sons, 1934, p. 34.

25. Easton, pp. 33-34.

26. Easton, pp. 34-35; Roy C. Macridis, "A Survey of the Field of Comparative Government", in Eckstein and Apter, p. 48; Apter, p. 735; Rose, Theory and Method in the Social Sciences, pp. 251-252.

27. See Project Paper on "Anthropology," p. 3; Keesing, p. 193; Kluckhohn, pp. 273-274, 278, 280; George P. Murdock, "Universals of Culture", in E. Adamson Hoebel, Jessie D. Jennings, and Elmer R. Smith, editors, Readings in Anthropology, New York: McGraw-Hill, 1955, pp. 5-6.

28. Macridis, pp. 48-49; Project Paper on 'Anthropology," p. 10; Herman D. Stein and Richard Cloward, editors, Social Perspectives on Behavior, Glencoe: Free Press of Glencoe, 1952, section 2.

29. See Project Paper on 'Political Science," p. 10; Robert K. Merton, Social Theory and Social Structure, Glencoe: Free Press of Glencoe, 1957 edition, ch. 11.

30. Cohen, pp. 670-671; Hans Reichenbach, "Probability Methods in Social Science", in Lerner and Lasswell, p. 122.

31. Nagel, p. 688. For type of historical explanation used, see Project Paper on "The Many Meanings of History", pp. 13-14. See also Timasheff, p. 152.

32. Theory and Practice in Historical Study: A Report of the Committee on Historiography, New York: Social Science Research Council, 1946, p. 139.

33. Reichenback, p. 122; Lundberg, p. 55; Rose, Theory and Method in the Social Sciences, p. 247; Carl G. Hempel and Paul Oppenheim, "The Logic of Explanation", in Feigl and Brodbeck, p. 328; Joseph J. Schwab, "Education and the Structure of the Disciplines", unpublished paper prepared for the Project on the Instructional Program of the Public Schools, Washington National Education Association, 1961, pp. 4-5.

34. Herbert Feigl, "The Scientific Outlook: Naturalism and Humanism", in Feigl and Brodbeck, p. 11.

35. Feigl, p. 11. See also Project Paper on "The Many Meanings of History", pp. 1-7.

36. For example, see the attempts by political scientists such as Easton to analyze the existing state of political science and current conceptual tools and to propose their own framework. The plurality of theoretical frameworks for international relations can be seen in Stanley Hoffmann, editor, Contemporary Theory in International Relations, Englewood Cliffs: Prentice-Hall, Inc., 1960. For a more extensive discussion of one of these, see Richard C. Snyder, H. W. Bruck and Burton Sapin, editors, Foreign Policy Decision Making, Glencoe: The Free Press of Glencoe, 1962. Attempts by sociologists to develop varied conceptual frameworks can be seen in the work of Talcott Parsons and Edward Shills, Toward a Theory of Action, and Arnold Rose, "A Systematic Summary of Symbolic Interaction Theory", in Rose, editor, Human Behavior and Social Processes, Boston: Houghton Mifflin Company, 1962, pp. 3-9.

37. Feigl, p. 15.

38. Each discipline is described in more detail in the Discipline Papers developed by the Project.

39. For example, see Project Discipline Paper on'Political Science'' p. 8; on'Anthropology'' p. 1; on'Sociology'' pp. 7-8, 25-26.

40. Project Paper on "The Many Meanings of History", p. 21.

41. Brown, pp. 34-35.

42. Brown, pp. 26-33

43. For example, see Project Discipline Paper on'Sociology'' pp. 25-26.

44. George P. Murdock, "Sociology and Anthropology", in John Gillin, editor, For a Science of Social Man, New York: Macmillan, 1954, pp. 22-23.

45. Kluckhohn, pp. 245-247, 273; Keesing, p. 1; Haring, "Anthropology: One Point of View", p. 5; Clyde Kluckhohn, Mirror For Man, New York: Whittlesey House, McGraw-Hill Book Company, 1949, pp. 2, 9; Goldschmidt, p. 31

46. Fred W. Voget, "Anthropology and Sociology", in Joseph S. Roucek, editor, Readings in Contemporary American Sociology (Paperback), Paterson: Littlefield, Adams, and Company, 1961, p. 472; Project Discipline Paper on 'Anthropology'' p. 6.

47. Project Discipline Paper on'Political Science'' p. 6.

48. Macridis, pp. 47-49. For an example, see Lucian W. Pye, "The Non-Western Political Process", in Eckstein and Apter, pp. 657-665.

49. Kenneth E. Boulding, Economic Analysis, New York: Harpers, 1955 edition, pp. 3-4.

50. For a study of the way in which anthropologists have tried to examine the limits of economic theory for other societies, see Karl Polanyi, Conrad M. Arensberg and Harry W. Pearson, editors, Trade and Market in the Early Empires, Economics in History and Theory, Glencoe: The Free Press of Glencoe & The Falcon's Wing Press, 1957.

51. Brodbeck, p. 78; Kenneth Boulding, A Reconstruction of Economics (paperback), New York: Science Editions, 1962, pp. 3-5; Heinz Eulau, The Behavioral Persuasion in Politics, paperback, New York: Random House, 1963, pp. 19-21.

52. Rose, Theory and Practice in the Social Sciences, pp. 251, 252; Ulmer; p. 10; Louis Gottschalk, Understanding History, New York: Alfred A. Knopf, 1956, pp. 253-255.

53. Project Paper on "The Many Meanings of History", pp. 16-17; Leonard Swift, "Explanation" in B. Othaniel Smith and Robert H. Ennis, Language and Concepts in Education, Chicago: Rand McNally & Company, 1961, pp. 190-193; Nagle, p. 689.

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and the Analysis of Political Behavior", in Ulmer, pp. 271-276; and in Martin Shubik, Readings in Game Theory and Political Science (paperback), Garden City: Doubleday and Company, Inc., 1954. For the use of interviewing techniques in geography, see Charles M. Davis, "Field Techniques", in Preston E. James and Clarence F. Jones, editors, American Geography, Inventory and Prospect, Syracuse: Syracuse University Press, 1954, pp. 523-527. For the use of scaling devices in studying legislative behavior, see pp. 377-413 of John C. Wahlke and Heinz Eulau, editors, Legislative Behavior, A Reader in Theory and Research, Glencoe: Free Press of Glencoe, 1959.

56. Rose, Sociology, p. 117. For the limitations of prediction for individuals, see Kenneth Boulding Principles of Economic Policy, Englewood Cliffs: Prentice-Hall, Inc., 1958, pp. 2-3; Heinz Eulau, "Segments of Political Science Most Susceptible to Behavioristic Treatment", in Charlesworth, The Limits of Behavioralism in Political Science, pp. 45-46.

57. On the important role of chance in events, see Snyder, Bruck, and Sapin, pp. 58-59; Reinhold Niebuhr, "Is History Predictable?" in John E. Nordskog, editor, Social Change, New York: McGraw-Hill, 1960, pp. 160-163. See references under footnote 51 for uses of social science generalizations in history. For the complementary role of different types of explanation, see Brown, p. 193.

58. Eulau, The Behavioral Persuasion in Politics, p. 20.

59. For the goals of curriculum developed by this project, see the lists under the Project papers on concepts, values, and skills.

60. The means of determining significance of concepts are discussed in the Project Paper on "Concepts, Generalizations, and Theories".

61. Questions related to the age at which the structure of a discipline should be introduced are discussed in Deciding What to Teach, Washington: Project on the Instructional Program of the Public Schools, National Education Association, 1963, pp. 32-34,

62. Deciding What to Teach, p. 24-38, 45.

63. For example, see Theodore W. Parsons, "Anthropological Contributions to Elementary Social Studies Programs", unpublished paper, pp. 8-11.

64. A good argument for the importance of different approaches so that pupils will see various ways of using knowledge from the disciplines, is presented in Deciding What to Teach, pp. 41-43.

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PROJECT SOCIAL STUDIES, UNIVERSITY OF MINNESOTA
CURRICULAR FRAMEWORK

Kindergarten -- The Earth as the Home of Man

This course introduces children first to their local area and then to the world as a whole. It introduces simple map and globe skills. Stress is placed upon the use of pictures and other visual materials, upon direct observation within the community, and upon use of children's literature to teach pupils about other peoples of the world.

Units:

1. The Earth as the Home of Man

   Children explore their own neighborhood, learn simple site concepts illustrated in the neighborhood, learn something about directions and distance, and make simple maps.

2. A World of Many Peoples

   This unit uses children's literature to help children find out about the many different peoples of the world. The emphasis is upon diversity and upon the psychic unity of mankind. The unit is not to be taught in its entirety at one time; rather books are to be used with children throughout the year.

3. Our Global Earth

   Children review the use of maps to represent reality, study new site concepts, and learn about globes and the effects of globalism upon seasons and upon night and day. Part of the unit is taught at one time, but the rest is scattered throughout the year at the appropriate seasons.

4. A Home of Varied Resources

   Children study different neighborhoods within the community, noting diversity among them and the ways in which they are interdependent. They also study the interdependence of the world in terms of things which they find in the community which come from other places and things made in the community which are sold in other places. They begin to generalize about the reasons for this interdependence.

5. Man Changes the Earth

   This unit makes use of the community, of children's picture books, and other pictures and films to show how man changes the earth.

Grade One -- Families Around the World

Children will study families from different societies, including one from the Far East. They will be asked to make comparisons with their own families. At the end of the year, they will look back over the families they have studied and will be asked to generalize about families in their own community as well as around the world.

The family is being used as a vehicle to teach a series of important social science concepts related to culture, social organization, social process, and site. The families studied have been selected carefully to point up cultural diversity, to help pupils recognize the uniqueness of culture, to show that culture is learned, to teach pupils about norms and values, and to emphasize cultural universals and the psychic unity of mankind. The selection of families with very different structures and role differentiations will help to emphasize the variability of human behavior. The study of these families should also teach ideas about structure, role, role differentiation, and function. Despite the diversity, pupils will also notice universals. They will note that all people have to satisfy certain basic needs, but that they satisfy them differently. They will learn that all societies have some ways of socializing children. The families to be studied have also been chosen with a view to teaching pupils different site concepts. Consequently, pupils will stddy families in different types of physical environment. We recommend that they study the family in an Indian group which inhabited the area in which the pupils live. By comparing the way in which these Indian families lived with the way in which families of today live in this area, pupils should begin to understand the idea of the cultural use of the environment. Children will review map and globe skills as they study each unit.

Units:

1. Hopi Family (shows change over time)
2. Chippewa Family (for children in Minnesota)
3. Quechua Family (Peru)
4. Japanese Family

Grade Two -- Families Around the World

This course makes up the second part of a two year sequence which begins in grade one. The purpose of having pupils study more families than those included in grade one is to make sure that they will be able to generalize about cultural diversity, uniqueness, and universals. The families have been chosen to provide further contrasts with those studied in grade one. Each can also be used to teach different site concepts and to review map and globe skills.

Units:

1. Boston Family of Early 18th Century
2. Soviet Family in Urban Moscow
3. Hausa Family in Nigeria
4. Kibbutz Family in Israel

Culminating period in which children will put together all they have learned about families and about culture, social processes, and social organization.

Grade Three -- Communities Around the World

In this course the emphasis shifts from the family to the community. Now pupils study other institutions and also informal groups. The course introduces institutions such as schools, the church, and government. Pupils will study some economic facets of societies such as specialization, trade, and types of work. However, an analysis of how the economic system works within the community is left for grade four. The frontier mining community has been chosen particularly to emphasize the need for law and government and the way in which people take their culture with them to new places. The Manus community is to be studied in two different periods, both before and after the contact with American soldiers during World War II. This unit emphasizes change through cultural diffusion, persistence of some cultural traits despite drastic change, and the cultural use of the environment. In this course, pupils will continue to study site concepts and review map and globe skills.

Units:

1. Rural and Urban Communities: A Contrast
   (Includes study of own community.)
2. An American Frontier Community: Early California
   Mining Camp
3. Paris Community
4. The Manus Community (Great Admiralties) in the 1930's
   and 1950's

Grade Four -- Communities Around the World

This course has an economic emphasis. The first unit introduces pupils to simple economic concepts related to how our economic system operates. Later units introduce pupils to the idea that not all peoples have the same type of economic system. Each community is chosen to illustrate a different type. Pupils will continue to study site concepts and to review map and globe skills.

Units:

1. Our Own Community
2. A Community in the Soviet Union
3. A Trobriand Islander Community (exchange system based upon reciprocal relationships rather than prices)
4. Indian Village South of Himalayas (Caste system includes reciprocal relationships in economic as well as other spheres. Economic system based on combination of reciprocal relationships and market system.)

Grade Five -- Regional Studies

The fifth grade course shifts to the study of how peoples, each with a different culture, use the land. The course centers around generalizations from the discipline of geography but also draws upon anthropology, sociology, and history. No attempt is made to cover all or any great part of the total land areas of the world; rather, a few topics are studied intensively.

The main theme of the course is that man uses his physical environment in terms of his culture (perceptions, values, level of technology). The course centers on selected case studies showing how man has dealt with his environment over time. Pupils begin their study of each general area of the world (the United States, Canada, Latin America) by examining and comparing a series of map patterns and working out a system of regions according to selected criteria. The pupils focus upon a handful of case studies rather than a detailed study of each region. Each case study is chosen with two purposes in mind: (1) It can be used to teach pupils more about the region within which it is located, and (2) It illustrates clearly one or more factors which bring about changing use of the land. For example, the case study on Pheonix shows changes resulting from technological developments, the study of the Red River Valley shows changes in crops grown in terms of changing markets, and the study of Birmingham shows changes resulting from the discovery of new resources.

Two different approaches to case studies are used to show the changing use of the physical environment. The study of the United States and Latin America uses the sequent occupance approach. Pupils look at man's use of the land when Indians lived in the area, during an early stage of occupance by white men, and during one or two other stages, including the present. As they study each new stage, they note many changes and then try to find out what accounts for these changes. Thus pupils will look at the Twin Cities area when Indians were the chief inhabitants, in the early lumbering and flour milling era, and today. As pupils look at each new stage, they note the ways in which this small area is tied to other parts of the region, the total area under study, and the world. This sequent occupance approach has been called the study of "cross-sections through time."

The second approach is used in the study of Canada. Pupils will look at at least one brief case study within each region of Canada. They will find out what happened to change man's use of the land without actually studying specific "cross-sections through time."

Units:

1. The United States
   - a. (Overview of patterns of U.S. and development of system of regions.)
   - b. (Sequent occupance case studies with emphasis upon change over time under impact of changing culture. The class should begin with its own region and then turn to the others.)
     - 1) The Midwest
       - a) Case study on the Twin Cities
       - b) Case study on the Red River Valley
       - c) The Midwest as a Region
     - 2) The Northeast
       - a) Case study of New York
       - b) The Northeast as a Region
     - 3) The South
       - a) Case study on Birmingham
       - b) The South as a Region
     - 4) The West
       - a) The Pacific Southwest
         - (1) Case study of Los Angeles
         - (2) The Pacific Southwest as a Region

- b) The Pacific Northwest
  - (1) Case study of Seattle
  - (2) The Pacific Northwest as a Region
- c) The Intermountain West
  - (1) Case study on Phoenix
  - (2) The Intermountain West as a Region
- d) The West as a Region

2. Canada
   - a. (Overview of patterns of Canada and development of system of regions.)
   - b. (Traverse across southern Canada through brief study of important cities or towns.)
   - c. Case studies of development of other cities.
     - 1) Kitimat
     - 2) Schefferville
     - 3) Port Radium
     - 4) Inuvik
     - 5) Steep Rock

   (Pupils will break up into committees to work on some of these case studies.)

3. Latin America
   - a. (Overview of patterns of Latin America and discussion of various ways of regionalizing.)
   - b. (Historical-geographic case studies emphasizing three periods: the use of the land by early Indian civilization, the use of the land in the days of early European colonization, and the use of the land today.)
     - 1) Buenos Aires (Humid Pampas)
     - 2) Cuzco and the Highlands of Peru
     - 3) Manaus and Amazonia
     - 4) Sao Paulo and Highlands of Brazil
     - 5) Chile (3 major physical regions)

     (#2 is to be used only if pupils have not studied the Center's first grade course.)

Grade Six--The Formation of American Society

This course in American history is articulated carefully with that in the tenth grade. It builds upon concepts developed in the earlier grades. The course emphasizes culture, culture contact, culture change, and cultural continuity. This course differs from grades 1-4 by looking at total cultures. It differs from grade 5 by emphasizing culture contact and the movement of people with their culture to new places rather than the changing use of the same physical environment.

Unit:

1. Indian America
   (Case studies of two Indian cultures, each of which had contact with a different group of European colonizers. Pupils study the Aztecs and the Iroquois cultures as total cultures.)

2. The Colonization of North America
   a. The Idea of Colonization
   b. Spanish Settlement of Mexico
   c. French Settlement of Canada
   d. English Settlement of North America
      (Uses case studies of settlement in Jamestown and Plymouth.)

   (The entire unit contrasts the culture of the colonizers with that of the Indian groups with which they came in contact.)

3. Revolutionary America
   a. Williamsburg
   b. Boston

   (The unit contrasts the culture of the earlier colonies with that of the period just prior to the revolution and shows the changes which led to the revolution.)

4. National Expansion
   (Internal migration and immigration into Midwest and New South. Transportation developments which facilitated this movement.)

5. Civil War and Reconstruction
   (Uses culture concept to analyze causes of Civil War.)

6. The Completion of National Expansion
   a. Indians of the Plains
      (Case studies of the Cheyenne and the Mandan)
   b. The Movement of White Men to the Plains and their contact with the Indians.

Grade Seven -- Man and Society

This course draws most heavily upon sociology with some comparative material from anthropology. It also uses some concepts from other social sciences. The course builds upon what students have learned in elementary grades. The course is taught before the other behavioral sciences in the junior high school. This makes it possible for pupils in grade eight to use analytical concepts which political scientists have borrowed from sociologists. It also makes it easier for pupils to fit the political and economic systems into the wider framework of the social system. Pupils in grade nine draw upon the seventh grade course as they study several socio-economic problems.

Units:

1. Overview: Introduction to Human Behavior and Sociological Reasoning
2. Man's Behavior: The Physical Basis
   (This unit develops the idea that man's biological nature sets limits to and opens possibilities for his behavior but does not determine it. Pupils examine racial theories and learn that there are more similarities than differences among human beings and that culture is more important than physical differences in affecting how different groups of people behave.)
3. Socialization
   (Pupils learn that man's biological nature makes socialization not only possible but necessary. By using comparative materials from other cultures, they find out that men are extremely plastic, that they are able to satisfy basic needs in a variety of ways. Pupils become aware of how pupils learn through the process of role-taking and how each person develops a self.)
4. The Family
   (This unit focuses upon the Family as an example of a primary group. Both historical and comparative materials are used to teach pupils about family functions and structure. Pupils also learn something about factors bringing about change in families and about the interrelationships of the institution of the family to other social institutions. In addition, pupils learn that most of the social processes found in society as a whole are also found within the family.)
5. Our Behavior in Groups and Crowds
   (Focusing upon education as another example of an institution, this unit uses the school as a case study to teach pupils something about organization within groups and

the tendency toward bureaucracy. They learn about the workings of bureaucracies and find that much behavior within a bureaucracy cannot be accounted for by the formal structure. Pupils also study the ways in which members of small groups influence behavior and analyze differences between behavior in crowds and behavior in integrated groups.)

6. Intergroup Relations
(Pupils apply conceptsand generalizations learned earlier to an analysis of social problems growing out of prejudice and discrimination against minority groups in this country. The focus is upon a study of discrimination against Negroes, but the unit also deals with other minority groups.)

Grade Eight -- Our Political System

This course draws most heavily upon political science but uses concepts from other social sciences. The emphasis is upon decision-making at the level of the individual voter as well as at the level of interest groups and governmental institutions. Most of the units are developed with the use of case studies. The approach is behavioral rather than structural. However, students are taught how the structure of government affects decision-making.

Units:

1. Overview of Our Political System
(This unit analyzes political conflict, compromise, and the need for government and law. It examines American political ideals and contrasts them briefly with other political ideologies. It provides an overview of our federal structure and of our theoretical system of separation of powers. These facets of our political system are contrasted briefly with unitary and parliamentary systems. The unit establishes questions to use in examining decision-making in later units. It also establishes questions to use in evaluating political institutions against American ideals.)

2. Political Parties and Elections
(Among other things, pupils will study ways in which political scientists study voting behavior. They will learn about sampling techniques and certain problems arising from interpreting findings, including the use of correlational studies. The unit includes an analysis of political behavior of voters. Pupils will set up hypotheses about such behavior and check them against data in numerous tables. They will be asked to figure out limitations of

the data in these tables and other kinds of data needed before drawing conclusions.

This unit is taught in a much condensed form during years when there is no national election. During such years, pupils turn to an area study of the Middle East at the end of the year. The emphasis is upon foreign policy decision-making in our relationships with the Middle East and upon the political systems in this area. In election years, this area study is omitted and pupils study the current political campaign and election in more detail in connection with this second unit. Those who have studied the eighth grade course in non-election years will make a more thorough study of a campaign and election the next year during the ninth grade. At the ninth grade level, too, an area study on the Middle East will alternate with the study of the election. However, the emphasis in the area study will differ from that in the eighth grade. See 9th grade outline below.)

3. Executive Process
(Uses case studies of presidential-decision-making such as the decision to drop the atomic bomb on Hiroshima, the Cuba Bay of Pigs and Quarantine Decisions, and the Little Rock decision. Also uses case study of a governor's decision to declare martial law during a strike.)

4. Legislative Process
(Uses case studies such as Civil Rights Acts of 1960 and 1964 and attempt to change Rules Committee in 1961. Also uses much data on background of congressmen; on distribution of committee chairmen according to region, rural-urban, and safe districts; on analysis of voting behavior in terms of district represented, etc.)

5. Judicial Process
(This unit was designed with two major purposes in mind. First, it helps pupils understand judicial decision-making. Second, it provides for the study of the rights guaranteed by the federal constitution. Both purposes are met through the study of several long case studies as well as through the analysis of short cases and many other kinds of materials.)

6. Decision-Making at the Local Level
(This unit is much shorter than the others. Pupils use concepts learned earlier to analyze one or more crucial problems in their own community. They identify and define problems and examine alternative ways of trying to solve them.

They also analyze power relationships, political institutions, and decision-making at the local level and note relationships with other levels of government. The unit calls for a contrasting study of a problem facing a large metropolitan area in their state if pupils live in a small town.)

Grade Nine--Our Economic System and Socio-Economic Problems

To a large extent, pupils will learn these ideas through a process of inquiry, both through the simulation games and other kinds of activities. Pupils will apply these basic ideas in connection with several topics and problems. They will also use ideas from other social sciences as they study some of the problems. For example, the unit on Pockets of Poverty in the U.S. draws upon geography, sociology, and history as well as upon economics. Furthermore, pupils must understand the role of government in dealing with this and other problems. In non-election years, the course ends with an area study which emphasizes a contrasting economic system and socio-economic problems.

Units:

1. The United States: An Affluent Society?
   (This overview of economics raises questions about what economics is, and about kinds of economic decisions needed in any society. It also raises the issue: Is our society an affluent society, or can we still say that our economic system must deal with the problem of scarcity?)

2. How Our Economic System Works
   (Uses simulation games and other devices to teach basic ideas.)

3. Farm Problems
   (Emphasis upon supply and demand, government relationship to market, alternative costs, etc.)

4. The Auto Industry
   (Illustrates a number of economic ideas such as administered prices, role of advertising in developing markets, mass production, use of capital to increase production, etc.)

5. Pockets of Poverty in the U. S.
   (Deals with poverty arising from automation, lack of education, exhaustion of resources in area or competition with new resources or products, old age, etc.)

6. Optional for schools desiring unit -- Selecting an Occupation in the Modern Age

7. Units which alternate in election and non-election years.
   a. Non-election year:
      Area Study on Middle East. (To be taught at end of course with emphasis upon economic systems and socio-economic problems.)
   b. Election year:
      Political Campaign and Election. (To be taught as current affairs program during the election campaign. To build upon and draw upon what pupils learned in eighth grade. Emphasis upon some of economic issues in election campaign. Also touches upon some of other economic aspects of campaign such as alternative costs facing candidates.)

Grade Ten -- American History: Development of American Civilization

This course has little resemblance to the typical history course in the senior high school. The course will be highly analytical, drawing upon the concepts pupils have learned from the other social sciences. Pupils will study the interrelationships among our social, political, and economic systems. They will study the cultural assumptions which make one period different from another. And they will study factors resulting in social change. The course will continue to build concepts and generalizations from the behavioral sciences.

Units:

Part I -- Formation of American Civilization, 1630-1860

Unit 1. The Colonial Age
(Pupils will study the cultural assumptions of the colonists and the relationships between these assumptions and the development of institutions in this period. The unit does not call for extensive study. Rather it is included to provide a foil for later periods in order to show change.)

Unit 2. Republican Age, 1763-1820
(This unit deals with 18th century principles and their effects upon Americans. Again, the chief interest centers upon the cultural assumptions of the people in this age. Key attention is given to the political system and in particular to political party theory. The unit stresses the relationship of the political system with the economic and social systems.)

Unit 3. Democratic Age, 1820's to 1860's
(Pupils will investigate changes in the social system. They will study laissez-faire economy as a system and its relationship to the negative vs. positive liberal state. Pupils will also study the implications of this period for the Civil War and for the foundations of industrial growth.)

Unit 4. Civil War and Reconstruction

(This unit will focus on the attempt to apply the Egalitarian Ideology of the Democratic Age to the Negro and on the ramifications of this attempt for the political system. Classically the Civil War is taught in military terms, but here the students will approach it as a case study of the political system at a crucial period. The unit will stress the cultural configuration of America at this time, with its emphasis on middle-class individualism, so that the students will understand why the struggle was a political one and why the economic and social rehabilitation of the Negro failed.)

Part II -- Modern America, 1870 to Present

Unit 5. Industrialization of America, 1870-1914

(Students will study the nature of industrialism and its ramifications in a wider context, larger time span, in a more analytical manner than is traditionally done. This unit will utilize economic growth theory as a framework for American history from the 1840's to the 1910's to emphasize the major shifts in the American economy which accompanied the changing nature of industrialism. The students will also investigate the ramifications of this industrial change for other aspects of the culture such as social organization, political organization, and ideology.)

Unit 6. Consumption Economy, 1920 to Present

(This unit deals with the development of the consumption economy, with the social implications of such an economy, with problems of such an economy (including the depression of the 1930's and business cycle theory), and the extension of this economy into the 1950's and 1960's.)

Grade Eleven -- Area Studies

This course uses all of the social science disciplines to analyze the culture of the area studied. It draws upon the study of behavioral sciences in junior high school in analyzing the economic, political and social systems. An attempt will be made to show how different social scientists study the area and the kinds of questions they ask. Emphasis will be upon transferable concepts and generalizations as well as upon important ideas about each area studied. The course emphasizes cultural values which give unity to the social system. It focuses upon cultural change and continuity during the study of the historical background of each area. Pupils will also study the relations of the area with other parts of the world and particularly with the United States.

Units:

Western Europe -- (includes problems of international trade in connection with common market)
Soviet Union -- (include eastern European satellites)

China
India

Grade Twelve -- Value Conflicts and Policy Decisions

By this time pupils should have a fairly good grasp of concepts and generalizations from the different social sciences. They should know something about the kinds of questions asked by those in each discipline and the methods used by each to advance knowledge in the field. This course builds upon what pupils have learned earlier. It consists of a series of domestic and international problems which pupils will analyze using the different disciplines for help. If time permits, the year will end with a unit on What Is theGood Life?--a unit which will help pupils analyze values and which will summarize the role of the social sciences in helping people select courses of action to achieve values and even to decide which values support each other and which are inconsistent. In essence, this course focuses upon problems facing the U.S. at home and abroad. Each problem involves value conflicts and policy decisions.

Units:

1. How Can We Preserve Our Security Without Sacrificing Essential Freedoms? (Problems of Security and Freedom)
2. The Challenge in Underdeveloped Countries (This unit draws heavily upon economics, geography, and anthropological studies of technological change.)
3. Promoting Economic Growth at Home.
4. Resolving Race Problems at Home.
5. Africa South of the Sahara (A case study of an area which faces a severe racial conflict and in which totalitarian and democratic ideas are in conflict.)
6. Problems of War and Peace
7. What Is the Good Life?

The Social Sciences Disciplines in the Minnesota Project Social Studies Curriculum

Grade	History	Geography	Anthropology	Sociology and Soc. Psych.	Economics	Political Science
K	--	Major Focus*	Culture concept used. Imp't in unit on Home of Many Peoples.	--	--	--
1	Incidental but units on early Indians of Minnesota and on early Hopi Indians	Part of each unit.	Major Focus on (concepts and content)	Study of own family by way of contrast with others	Very incidental. Building background needed for trade and specialization	--
2	Incidental but unit on Early Bostonian Family	Part of each unit.	Major Focus on (concepts and content)	Concepts taught	Concepts needed for more thorough study (e.g. specialization, trade, money)	--
3	Incidental but unit on Early Mining Community	Part of each unit.	Major Focus on (concepts and content)	Important in study of own and contrasting communities in U.S.	Incidental - study of some concepts needed later.	Intro. of ideas of law and government in each unit. Particularly heavy focus in unit on mining community.

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* Where major focus is written in caps, the course focuses primarily upon one discipline and deals with it fairly systematically. However, it still draws upon the other disciplines.

Grade	History	Geography	Anthropology	Sociology and Soc. Psych.	Economics	Political Science
4	--	Part of each unit.	Important in two units: community in India and Trobriand Islanders.	--	Major Focus (on concepts and content)	--
5	Historical aspects in each of geog. case studies	MAJOR FOCUS	Use of culture concept	Use of culture concept	Incidental ec. geog.	--
6	MAJOR FOCUS	Incidental Imp't in unit on westward movement	Use of culture concept. Also important focus in unit one.	Incidental	Incidental	Incidental
7	--	C. events only	Important part of several units	MAJOR FOCUS	--	Incidental on role of government in dealing with social problems
8	Incidental--use of historical case studies. See also 8-9 below.	Incidental in several case studies See also 8-9 below.	Use of culture concept.	Use of culture concept. Use of case studies drawing on field of minority group relations.	Use of case study drawing on labor-management relations.	MAJOR FOCUS

Grade	History	Geography	Anthropology	Sociology and Soc. Psych.	Economics	Political Science
8-9 (A unit on the Middle East will be taught in non-election years. It will alternate with study of current election.)	Historical background for area study on Middle East	Geographic background in study of Middle East	Use of culture concept and study of culture of Middle East	Study of social systems and social problems in Middle East	Study of economic systems in Middle East	Study of governments in Middle East and foreign policy decision-making Study of elections.
9	--	Important in one unit--Pockets of Poverty	Culture concept important	Important in unit on Pockets of Poverty	MAJOR FOCUS*	Incidental--role of government in economy
10	MAJOR FOCUS*	Incidental	Use of culture concept as focus for study of historical periods	Important emphasis --focus in one unit. Development of concepts.	Important emphasis--focus in one unit.	Concepts and ideas provide focus for several units.
11	Important in each area study	Important in each area study	Important in each area study	Important in each area study	Important in each area study	Important in each area study

Grade	History	Geography	Anthropology	Sociology and Soc. Psych.	Economics	Political Science
12	Important in area study on Africa. Hist. background for several of problems units.	Important in area study on Africa and in unit on Ec. Growth in Underdeveloped countries.	Important in area study on Africa and in unit on Ec. Growth of Underdeveloped countries, and in unit on Good Life.	Important in area study on Africa. Major focus of unit on Race Relations. Important in unit on Good Life.	Important in area study on Africa. Major focus of two units.	Important in area study of Africa. Major focus of two units.

1638

Background Paper

IMPLICATIONS FOR TERMINOLOGY OF THE LACK OF CONCEPTUAL INTEGRATION IN THE SOCIAL SCIENCES

Robert Berkhofer

So great is the profusion and confusion of terminology in the social sciences that an innocent observer might well conclude that the greatest barrier to advancing the study of human behavior is terminological. Few terms cut across many fields and many terms are used differently even by theorists in the same discipline. Even the unsophisticated undergraduate soon realizes that the social sciences singly, let alone collectively, have not achieved conceptual integration; hence they possess no standardized terminology. As a result of this lack of conceptual integration, squabbles over jargon frequently conceal disputes over very real problems about the nature and explanation of social phenomena. The implications of this grave deficiency in conceptual and terminological unification for pedagogy are instantly obvious. They pose the problem of reducing terminological chaos to mere complexity for the purposes of teaching the social sciences in elementary and secondary school.

Disciplinary Fields and Terminology

Because of the independent growth of the various social science fields, the sector of human behavior explored and the explanation for that behavior depend upon the discipline in the present stage of development in the social sciences. While a few people have noticed hopefully, or even promoted, convergence among the fields,[1] no overall system of analysis and explanation exists for social behavior.[2] Thus any attempt to understand fully social science terminology must begin from the starting points of the traditional disciplines' definitions of social reality and the particular terminology used to talk about it. The first task, then, is to discover what is being explained and, next, what is assumed to explain it. In this way assumptions behind the terminology will be uncovered.

More important to the reader outside the discipline, much of a discipline's vocabulary rests upon implicit assumptions. Worse from the viewpoint of the outsider, whole areas of data are of no concern or just assumed as given, although such data may be the chief concern of another discipline. For example, much of the social psychologist's concern about human motivation seems of little real concern to most economists in their study of consumer behavior. Thus disciplinarians have a whole set of values, hopefully explicit but ordinarily implicit, about the nature and domain of their studies and the proper explanation for the phenomena examined. Even the behavior discovered depends to a large extent upon the traditions of the discipline.[3]

Both because the various disciplines and theories within them have their implicit assumptions and areas of givens and non-concern and because the social sciences study human behavior in general (and frequently the same behavior), they both overlap and/or relate to each other in certain ways.[4] But the problem of discovering common, complementary, or supplementary concepts among the various disciplines is far more than a search for a mere list of words. Sometimes common terms are used differently; or perhaps more commonly, dissimilar terms refer to the same general phenomena. For example, "role" implies many different things to various theorists in social psychology, psychology, and sociology; while "rank" in anthropology and "status" in sociology both seem to apply to social position. Again, several disciplines may view the same behavior but select quite different emphases. How such different emphases result not only in different words but also in complementary or supplementary concepts can be seen when one examines the ways in which social scientists viewing the same behavior sometimes concern themselves merely with its manifestation and sometimes interest themselves in why the behavior occurred. Some disciplines, notable economics, are little concerned about the motivation of the behavior they examine so long as they can find regularities in the manifestations. Other social scientists feel that human behavior cannot be explained or predicted without knowing the "causes" behind it, as for example the anthropologists, who utilize their fundamental concept of culture for this purpose. For this reason, the clarification of terminology must not discount the existence of the disciplinary basis for terminology at the same time that it recognizes the congruences of the various disciplines as they study similar or common social behavior.

The Emergent Level of Social Phenomena and Terminology

Although the disciplines vary considerably in their domain of study and their nature of explanation, all deal with human behavior as social phenomena. While there is no overall agreement upon the exact limits of that body of material, at its core seems to be some proposition such as that advanced by a leading sociology text: "the way men behave is largely determined by their relations to each other and their membership in groups."[5] Thus whether the social scientist considers the behavior of one human being, several, or a whole population he studies phenomena that is wholly or partially a result of social relationships. Not only is sociality--for lack of better word--considered a basic fact of human existence; but in a sense it also constitutes an explanation for many of the manifestations of that existence, since social scientists believe in an emergent level of the social apart from the biological or psychological. Upon the existence of such a level they stake their very name and reason for existence.[6]

As a result of this central interest, three major foci of study--culture, personality, and society--have arisen in those social sciences (sociology, social psychology, and anthropology) most concerned with the total range of human social behavior. In turn, these foci of interest have developed into central terms in these and other disciplines under such concepts as: personality or self; society, social system or social organization; and culture or cultural system. Because all of these terms are abstracted from the same phenomena, they are necessarily interrelated. But the nature of this relationship depends upon the discipline and even the theorist under examination. Overlapping occurs given the common referent, but cutoffs or boundaries between any two central terms differ greatly according to theory. For example, Talcott Parsons subsumes much of culture under personality and expecially social system in spite of his disclaimers;[7] cultural anthropologists stress culture more, and symbolic interaction theorists in sociology claim that no difference exists at all.[8]

In some ways, these disputes are not so important as the fact that differing theorists examine the same phenomena and either select different parts for emphasis or use dissimilar terminology for the same phenomena. To help the teacher and student through this apparent jungle of jargon to the essentials of social science knowledge, some method must be achieved whereby the exact phenomena under examination is specified regardless of terminological differences. Such a method would not only clarify the terminology of the disciplines devoted to the larger spectrum of human behavior but would also clarify the relationship of the various social science fields to this central core of social phenomena.

Thus, for the purposes of this project, it is proposed that social science terminology be examined in terms of a chart constructed around three basic ideas:

(1) processes
(2) structures or organizational units
(3) number of social actors involved.

It is not proposed that this chart constitutes an integration of the social sciences. Rather it serves as a "map" to the usage and understanding of social science vocabulary in lieu of a much-needed, but as yet unattained, conceptual integration.

Process

Like all things, human behavior and social relationships exist in time. Of necessity, then, they are assumed in flux. As a result, the phenomena studied by social scientists are presumed in process, if we mean, as Sorokin does,

> ...any kind of movement, or modification, or transformation, or alternation, or "evolution", in brief any

> change, of a given logical subject in the course of time, whether it be change in its place in space, or a modification of its quantitative or qualitative aspects.[9]

While all social scientists are interested in change conceived broadly, only historians and archaelogists profess to be interested in the long span of human time as manifested in all its prolific concreteness and uniqueness. Most social scientists are far more concerned in time as an ordered sequence of analytical components--an ordered sequence that is repetitive, for without repetition there is no scientific law.

Thus the fundamental distinctions in regard to time for the social scientists are its duration and its repetitiveness of sequence. This is readily illustrated by a four-fold table:

DURATION	SEQUENCE	
	Repetitive	Non-repetitive
Short term	process	accident
Long term	process social change	trend history

Surely short term non-repetitive sequences or events are termed accidents, at least until comprehended by some genius into a larger theory. Long term non-repetitive sequences are referred to as trends or "history." They might also be called social change, but it seems more logical to employ this term for scientific laws regarding long term repetitive changes. If laws of social evolution exist, as Leslie White and others posit, then long term non-repetitive changes would be comprehended by law and should be included under theories of social change. Repetitive sequences are processes in the stricter and more usual meaning of the term, and process will be used in this manner in this paper.

In talking about the nature of process as repetitive sequence, the logical criteria for defining a specific process would seem to be at least three:

(1) The order of the sequence. What follows what?
(2) The uniformity or regularity of the sequence. How often does it occur? Does it follow the order invariably?
(3) The delimitation of the sequence. Where does it start? Stop?

While all three depend upon the discipline or theorist, the last criterion is most dependent upon the premises of what is being explained and what explains according to the theory under consideration.

Normally, process is presumed to do things or connect things, so we must turn to structure or organizational unit.

Structure

Involved in sequence and process, by logical necessity, are the elements of the process presumed coexisting at the same time and undergoing change. These become the structures or organizational units of analysis of the theory under review. Essentially then, an analytical structure or organizational unit is some arrangement of elements or components related in some way and coexisting in time. Again several logical criteria must be met for the definition of such units:

(1) What are the elements or components? How many are there? Are the components or elements simple or complex in themselves? From these questions are derived the complexity of the structure or organizational unit under consideration, in other words, its comprehensiveness. An organizational unit may consist of only two or three elements assumed basic or undifferentiated according to the theorist or discipline. Or, it may consist of what in other circumstances are considered complex organizational units or structures in themselves. For example, a social system may be conceived of as a dyad of two interacting actors or as a hierarchiacal arrangement of complex institutions.

(2) Thus to these questions must be added: What is the presumed nature of the interrelationships of the components? Is this interrelationship assumed to be tightly, that is, invariably related or only sometimes (or even accidentally) related? For example, are the institutions in the above example assumed to be organized into a tight configuration necessary to the maintenance and persistence of the social system under study, or are the institutions only casually related together at the moment of analysis? The answer to this question is fundamental to the controversy over much of theory in sociology and anthropology today.

(3) Lastly, but very importantly, what is the level of abstraction from observable behavior? Only history, and at times geography, deal with the concrete individual as their analytical structures or organizational units. In fact, the advances of social science have come about primarily because of abstraction from the individual in face of the Anglo-American ethical tradition of individualism.[10] It is not the individual that is studied, but the actor, the unit which acts out the role, the unit of the group, the unit of the social act, or the locus of culture.[11] Likewise, depending upon the discipline or theory, it is not the actual humans that comprise a group or a society but a cluster of roles, or institutions, or a social system, or a culture.

Obviously process and structure or organization unit cannot be separated in theory or practice. Processes produce, combine, modify, or maintain structures. Or, process and structure may be assumed to be the same. As with either process or structure, much study and controversy is devoted to the relationship of the two in actual cases. For example, can a structure be considered static enough to maintain its identity for study as structure rather than as an organization of components ever-changing? Can it be conceived in equilibrium in which changes are constantly counteracted so that the theorist can hypothesize processes and/or components for the maintenance or the persistence of the structure?

Number of Social Actors Involved

All disciplines deal with numbers of people ranging from the single individual to entire populations, but not all concepts apply to the entire range of population from one to all. Hence, it is necessary to add one more criterion to our chart: the number of people referred to by a concept. Since the human being is not usually referred to as a concrete entity, it will be more useful to employ the social aspect of the human being, which we have chosen to call the social actor in our chart.

General agreement exists among those social sciences most concerned about human behavior in its broadest dimensions concerning the essentials of social action and interaction or social relationships. Human behavior takes places in physical and social situations defined by the actor(s), and such behavior is in accordance with anticipated states of affairs (goals, etc.) and is normatively regulated (i.e., behavior is ordered according to the rules defined by a group of actors). The definition of the situation, the goals, and the norms are the result of social interaction. Social interaction does not mean the concrete events between a plurality of actors but rather the mutual orientation of the actors toward each other. This presumes a social level of explanation in the sense that continued interaction is assumed to have produced the reciprocal or complementary behavior as a result of mutual expectations and, according to most theorists today, of shared values of given groups of actors.[12] Whether as mutual expectations or shared values, culture is presumed fundamental.[13]

The implications for the level of analysis are increasingly controversial as the number of actors increases to an entire society. At the lowest end of the scale is a single actor who is presumed to have a personality or a self. When two or more actors are involved, however, theorists in sociology and anthropology disagree, and the other disciplines are very much involved with their differing perspectives. Terminological confusion abounds, because both the nature of the explained and what explains and the questions posed about processes and structures differ considerably between and within disciplines. But in reality all these problems relate to the nature of structure and can be reduced to the questions posed under that category. Perhaps an example will show these disciplinary differences and how they reduce to the simpler categories of structure.

Among the fashionable words today is "system". Not only is it used in combination with such words as "social," "cultural," "economic," "political," and even "personality," but systems analysis is proposed by some as the basis for an entirely new interdisciplinary approach among the social as well as the physical and biological sciences. Its proponents argue that it will eliminate the hindrance of the old unicausal explanatory model of classical physics and substitute a mutual interaction model more appropriate to the phenomena under study by the biological and social sciences (and even left-over problems in the physical sciences). According to one of the founders of this new general approach, a system is defined as "sets of elements standing in interaction."[14] When applied to the social sciences, the range of meanings for this short word extend from the analogical and metaphorical to the mathematical; each usage has different connotations and implications for conceptualization of a theoretical framework involving structure and process applied to the level of numbers of social actors.

Editor's Note: Professor Berkhofer prepared this paper for staff use. To identify and clarify differences in the usage of the term "system," he presented fairly lengthy quotations from the following authors: Alfred Kuhn,[15] Everett Hagen,[16] Anthony F.G. Wallace,[17] Talcott Parsons,[18] and J.O. Hertzler.[19] These quotations cannot be included in the public domain edition of this paper. The reader interested in analyzing these differences is referred to the footnote references after each man's name.

Other sociologists and members of other disciplines are debating vigorously at the moment just how rigid and tightly integrated a structure (or organization) society might be. Regardless of the disputes over "functionalism", "organicism", etc., the theorists in various disciplines are today attempting to interrelate more and more the structures and organizational units they postulate.[20] This should also be the aim of secondary and grade school teachers in the presentation of social science material. Furthermore, regardless of all the disputes over the nature of structure and process among the number of social actors, the theorists uniformly make at least two differentiations:

(1) Two or more actors are referred to as a group or aggregate.
(2) A society means the entire population of actors under study in which the theorist finds a more or less complete set of interactions.[21]

While some theorists may not need to treat society as analytically separate from groups within it, some disciplines like economics and political science, for example, frequently analyze the political and economic system upon this level as do certain of the stratification theorists in sociology. For these reasons, our chart uses three levels of analysis according to the number of social actors: one, group, and society.

The Chart

Now we have all the elements necessary for our chart as a guide to the social science tower of Babel. First, the chart specifies the level of analysis according to the number of actors, for every concept applies to one or more of these levels. Second, within each level are placed some organizational units or structures applicable to these levels and frequently used by one or more disciplines. Lastly, between the structures and between the levels are placed some relevant processes that are of common occurrence to one or more disciplines. Since culture is considered so fundamental by so many theorists today, it is made the basis of the chart.

Implications of Chart for Teaching

First, the chart specifies the referents for frequently-used words. For example, the process of socialization and enculturation used respectively by sociology and anthropology (depending upon whether the organizational unit under analysis is society or culture) applies to different levels of social actors. For example, sociologists developed the term socialization to refer to the process by which an individual becomes a member of society. Anthropologists invented the term enculturation to refer to the process by which an individual learns the culture of his group or society. Today sociologists and anthropologists use both terms to refer to the same behavior. However, these two terms actually apply to two different levels on the chart: first, the way the actor attains a self, and second, the way the actor is linked to the institutions of a group. The chart points out each usage and that they have the same behavior as referent.

As far as each process and structure or organizational unit of the chart is concerned, the questions posed earlier as logically basic to an understanding of such entities may again be asked. In fact, these questions should be constantly kept in mind by the teacher about each term taught so that he or she is careful not to reduce social science terminology to a set of oversimplified and memorized definitions.

Lastly, the chart is not meant to imply that the terms on the chart are basic to all disciplines. Rather the chart employs some basic terms used by those social sciences most concerned about the entire range of human social behavior, and the chart's structure is derived from concepts in those fields. Although, other disciplines do not always use this terminology, they too must at least erect theories that relate to these basic levels of societal analysis; hence the chart can be used to show the relationship of other disciplines to each other and to basic social data. For example, allocation in the economic system or allocation in the political system on the societal level presumes mechanisms on the other levels even though they are not specifically mentioned by the theorist. These assumptions are explicit in the case of the new political science but only implicit in all of economics except institutional economics.

FOOTNOTES

1. For such a recent attempt, see the authors in John Gillin, ed., For A Science of Social Man: Convergences in Anthropology, Psychology and Sociology (New York: Macmillan, 1954).

2. But see Alfred Kuhn, The Study of Society; A Unified Approach (Homewood, Ill.: Richard D. Irwin, Inc. and Dorsey Press, Inc., 1963).

3. A similar analysis for one discipline is Paul H. Furfey, "Sociological Science and the Problem of Values," in Llewellyn Gross, editor, Symposium on Sociological Theory (New York: Harper & Row, 1959), 509-530.

4. See Edith West, Project Social Studies Paper on the Social Science Disciplines.

5. Leonard Broom and Philip Selznick, Sociology (New York: Harper & Row, 3rd ed., 1963), 14.

6. Among many articles on social levels, see Abraham Edel, "The Concept of Levels in Social Theory," in Gross, op. cit., 167-195; Charles K. Warringer, "Groups are Real: A Reaffirmation," in Bartlett Stoodley, editor, Society and Self; A Reader in Social Psychology (Glencoe, Ill.: Free Press, 1962), 29-38.

7. See the protests of Clyde C. Kluckholn in Talcott Parsons and Edward A. Shils, eds., Toward A General Theory of Action Paperback (New York: Harper & Row, 2nd ed., 1962), 26-27n; and Richard C. Sheldon, in Ibid., 40-41.

8. Caroline Rose in conversation.

9. Pitirim A. Sorokin, Social and Cultural Dynamics (Boston: Porter Sargent Publisher, 1957), 53.

10. Talcott Parsons, Structure of Social Action (Glencoe: Free Press, 1949), devotes many pages to this theme.

11. I owe this list to Caroline Rose.

12. Recently Anthony F.C. Wallace, Culture and Personality Paperback (New York: Random House, 1961), 39-41 denies that shared values are necessary for a social system in order to have mutual expectations.

13. Two systems of analysis of social interaction and relations developed in a short space are Charles P. and Zona K. Loomis, Modern Social Theories; Selected American Writers (Princeton: D. Van Nostrand, 1961), 1-3; Don Martindale, Social Life and Cultural Change (Princeton: D. Van Nostrand 1962), 32-34.

14. Ludwig von Bertalanffy, "General System Theory," in General Systems: Yearbook of the Society for the Advancement of General Systems Theory, I(1956), 3. For a definition by physical scientists, see A.P. Hall and R.E. Fagen, Ibid., 18-28. The whole volume exudes the confidence of a new universal key to understanding the universe.

15. Kuhn, op.cit., 48-49, 213-214.

16. Everett Hagen, "Analytical Models in the Study of Social Systems, "American Journal of Sociology, XLVII (Sept., 1961), reprinted in Hagen, On the Theory of Social Change; How Economic Growth Begins (Homewood, Ill.: Dorsey Press, Inc., 1962), 506.

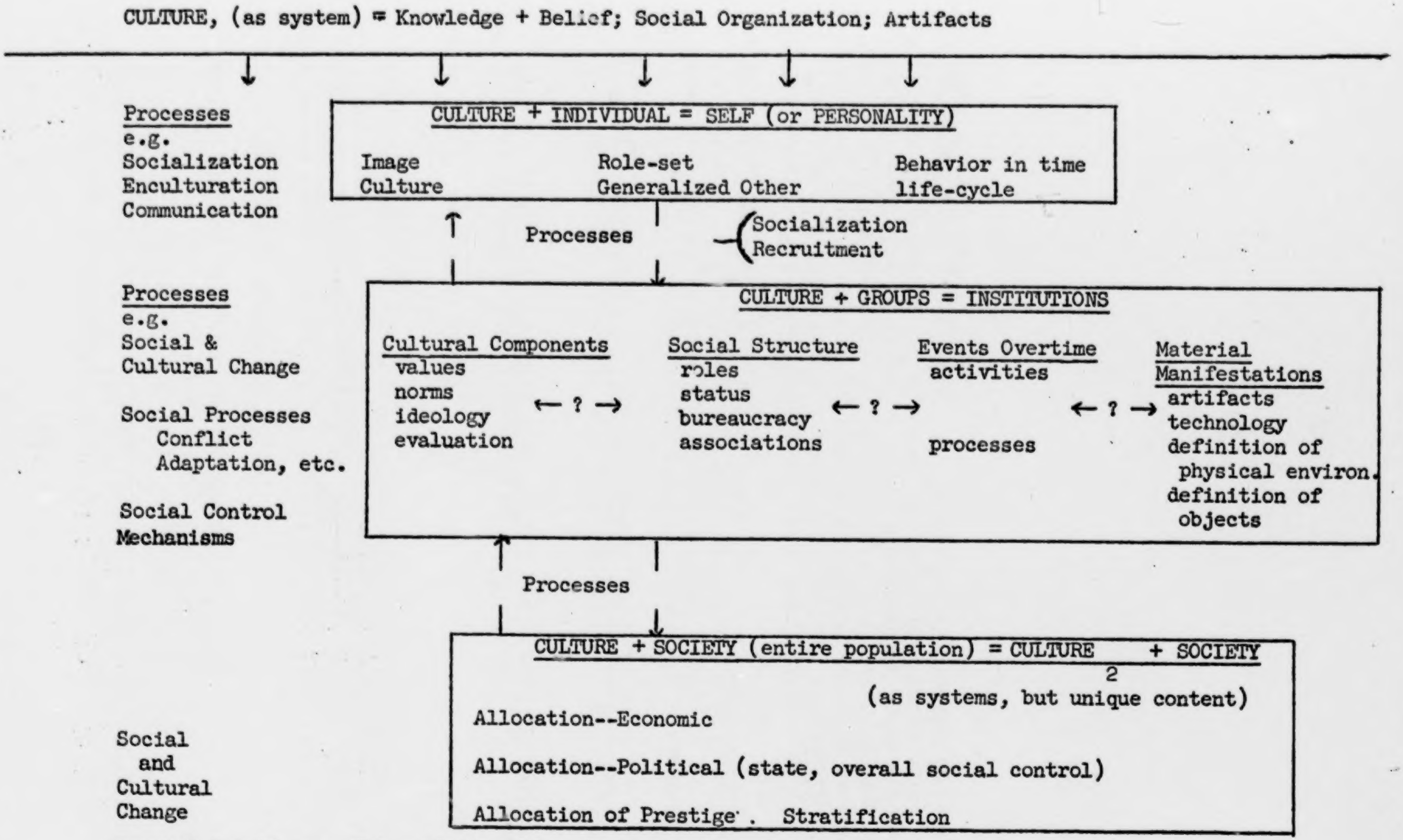
17. Wallace, op.cit., 31-32.

18. Talcott Parsons, The Social System (Glencoe, Ill.: Free Press, 1951), 3, Parsons and Shils, op.cit., 107-108.

19. J.O. Hertzler, American Social Institutions; A Sociological Analysis (Boston: Allyn and Bacon, 1961), 4.

20. A particularly interesting article from this viewpoint is Kingsley Davis, "The Myth of Functional Analysis as a Special Method in Sociology and Anthropology," American Sociological Review, XXIV (1959), 757-73.

21. "Society" is used in the sense that Martindale, op.cit., 32-33, does: "a complete system of social interaction, i.e., a set of social groups sufficiently comprehensive to solve for a plurality of individuals all the problems of collective life falling in the compass of a normal year and in the compass of a normal life." C. Marion Levy, The Structure of Society (Princeton: Princeton University Press, 1952), 113.


CULTURE, (as system) = Knowledge + Belief; Social Organization; Artifacts
Processes
e.g.
Socialization
Enculturation
Communication
CULTURE + INDIVIDUAL = SELF (or PERSONALITY)
Image
Culture
Role-set
Generalized Other
Behavior in time
life-cycle
Processes
Socialization
Recruitment
Processes
e.g.
Social &
Cultural Change
Social Processes
Conflict
Adaptation, etc.
Social Control
Mechanisms
CULTURE + GROUPS = INSTITUTIONS
Cultural Components
values
norms
ideology
evaluation
← ? →
Social Structure
roles
status
bureaucracy
associations
← ? →
Events Overtime
activities
processes
← ? →
Material
Manifestations
artifacts
technology
definition of
physical environ.
definition of
objects
Processes
CULTURE + SOCIETY (entire population) = CULTURE
2
+ SOCIETY
(as systems, but unique content)
Allocation--Economic
Allocation--Political (state, overall social control)
Allocation of Prestige . Stratification
Social
and
Cultural
Change

General Questions: Interrelationship of components? What is whole? Can process be separated from structure?

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Background Paper

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LEARNING PRINCIPLES

William Gardner and Vincent Rogers

Although the organization and development of a curriculum must be based solidly on an analysis of the significant ideas and concepts that comprise the disciplines under study, the final selection of content and the teaching techniques and materials employed must be based also on an analysis of educational research dealing with both the learning process and the characteristics, interests, and abilities of children. Much emphasis is placed upon the wide differences of opinion among learning psychologists and among theories of learning; seldom is equal attention given to the principles or assumptions upon which substantial agreement exists. While differences often appear to be wide, there are areas of commonality and agreement which can be identified and enumerated.

Reviewing and listing completely the areas of agreement among those who study learning would be virtually impossible and certainly inappropriate here. Rather, this paper will list and discuss several basic principles of learning which are particularly appropriate to social studies education and related to social studies objectives.

1. Social studies content is learned best when presented in meaningful contexts.

Although little controversy will take place over this broadly stated principle, quarrels will arise when an attempt is made to define "meaningful contexts." To be useful, this principle needs to be more carefully specified; in building a curriculum, two fundamental ideas need to be kept constantly in mind.

a. A meaningful context is one in which the student is stimulated to react to whatever content he is studying.

Various teaching strategies have been developed to describe situations where students can be led to interact with content. The most widely publicized concept or strategy is Jerome Bruner's discovery--the discovery of the "regularities of previously recognized relationships and similarities between ideas."[1] Unfortunately, Bruner's discussion of this concept is not completely clear and social studies specialists have done little as yet in developing illustrations of how this concept may be used.[2] Nor are the many illustrations from mathematics particularly helpful, since they seem to equate discovery with revelation rather than with a more specific strategy. Nonetheless, learning psychologists are high in their praise of discovery,[3] and one could hold out hope of its application in social studies.

Another strategy centers around the idea of controversy; topics concerned with the controversial issues in society are placed in the curriculum in the hope that students will become involved personally. The content may center around various aspects of well recognized present-day social problems[4] (i. e. medicare, recognition of Red China, race relatio.. or it may center in areas of American life which have been closed to examination by the general public (sex and morality, some aspects of economics, and so on).[5]

A third strategy could be called confrontation. Under this strategy, a student or class is continually forced to take a stand and to defend that stand in logical fashion in what has been described as a Socratic dialogue with the teacher. Oliver,[6] for example, has constructed sets of material for a "jurisprudential" curriculum which focuses upon "the earnest use of free speech and open debate for the students to determine what is man's proper relationship to his government." Part of Oliver's mode of presentation consists of this dilemma case which dramatizes the basic conflict and is usually handled "within a Socratic framework; that is, the teacher identifies which horn of the dilemma expresses a 'solution' of the problem for particular students and then presses the students to take into account the unpleasant legal or empirical consequences of this solution."[7]

Still another strategy is involvement. The student has a question of fair magnitude to answer from a field of study (i. e. What were the causes of World War I? What is revealed about American life by the periodic assasinations of presidents? What are the main geographic problems of the Upper Midwest?). He is directed to come to a conclusion about the problem on the basis of a relatively wide and intensive search in available materials. Obviously, secondary school students will not be able to answer such broad questions with any degree of sophistication, but different students will come to different conclusions and in the process will view social studies content as being composed, partially at least, of interesting and stimulating problems.

These four strategies are closely related, differing only in focus. Their use in curriculum development centers around the selection of content, the assumption being that some content is more appropriate to the construction of situations which will stimulate emotional involvement with the content.

b. A meaningful context is one in which new learning is related to concrete experience.

A favorite cliche in educational literature is the phrase "concrete experiences". Often, this wholesome notion is construed as meaning the teaching of "things" in preference to the teaching of "symbols"-- an inaccurate and even anti-intellectual interpretation.[8] Concreteness actually implies that new concepts and ideas be related to something already in the experience of the students. Meaning cannot be attached merely by using language (i. e. reading and talking) about social phenomena; rather, meaning is developed when the learner sees clearly the relationship of a new verbal symbol to ones he already possesses or to concrete reality with which he is acquainted.

The materials produced by a curriculum project should provide for many simple and varied illustrations of each new concept, idea, or skill. Several illustrations are needed because of differences in pupils' experiences. Simple illustrations are appropriate because they are likely to draw upon concepts already known by students. Using a wide variety of types of illustrations should help assure the widest possible transfer to new situations.[9]

2. Learning in social studies is facilitated by the development of various types of thinking processes. These processes, rather than rote learning, constitute the most important social studies goals.

"Tasks of thinking" are frequently stated as appropriate educational objectives but are as frequently ignored in practice. Teaching which encourages rote memorization is far easier than that which emphasizes thought processes. But the difficulty of such teaching alone cannot account for its lack of practice. Often it is assumed that pupils cannot think until a certain chronological or mental age is reached. In addition, many teachers are not informed as to the types of thought processes recommended and the techniques for encouraging them. Insufficient attention by curriculum developers to these processes has also led to lack of attention to thinking processes.

Despite the difficulties involved, a curriculum development project must plan for an emphasis upon thought processes. Usually, these processes are grouped into four categories.

a. Categorizing

Regardless of the topic taught or the age level of the learner, experiences in categorizing data ought to be built into the social studies program. This process (which could be thought of as organizing or ordering data) is an important one in the analysis of social science data. The work of Bruner,[10] Taba,[11] Hazlitt[12] and others indicates that school children at all grade levels can begin to develop this essential process.

b. Generalizing

Regardless of the topic taught or the age level of the learner, experiences in generalizing ought to be built into the social studies program. Generalizing may be broadly defined as the ability to deduce relationships which may exist between two or more concepts. The first grader who recognizes that trucks, trains, ships and airplanes "all make it easier for people to go from one place to another" is generalizing, as is the senior high student who sees that the depression of the thirties resulted from many social, political, and economic forces. While little evidence exists as to the possible effects of practice upon children's abilities to generalize, several studies do suggest that children can improve this ability through practice (Suchman,[13] Grener and Raths,[14] Bloom[15]).

c. Evaluating

Regardless of the topic taught or the age level of the learner, experiences in evaluating data ought to be built into the social studies program. The term evaluating includes much of what has often been listed in more specific terms under "critical thinking". It has to do with establishing the reliability, the validity, and credibility of various kinds of data, assessing the effects of a variety of possible biases, distinguishing between fact and opinion, and so on. Studies by Fahey,[16] Brown,[17] Bloom and Broder,[18] and others indicate the need for improving evaluative thinking skills at all grade levels. A number of other studies support the idea that practice in evaluative thinking produces improved performance at both elementary and secondary school levels.[19]

d. Hypothesizing

Regardless of the topic taught or the age level of the learner, experiences in hypothesizing ought to be built into the program. The importance of making "intuitive leaps" or intelligent guesses having to do with possible explanations of social phenomena cannot be underestimated if one is attempting to deal with the methods of the social scientist. This process is closely related to what is sometimes called creative or imaginative thinking, and research by Deutsche,[20] McAndrew,[21] and Torrance[22] among others, amply supports the feasibility of developing these methods of thinking at all grade levels.

The research findings regarding these four modes or types of thinking can be summarized as follows:

(a.) There is no single, clear-cut age of reason that must be attained before complex thinking processes appear; the ability to think exists in some children as early as age three and in most by age six.

(b.) The acquisition of a large number of facts does not guarantee that one will become a productive thinker who effectively uses the thought processes described above. A constant dose of ready-made answers to questions and solutions to problems appears to discourage the development of more complex thinking strategies.

(c.) There have been many instances in which individuals have developed exceedingly complex thinking skills despite tremendous gaps in their background and training. Nevertheless, it seems quite probable that for most of us rational powers do not develop instinctively; training is necessary. The most effective way to develop the thinking procedures outlined above is in the context of real, meaningful problem situations suggested by the content of the social studies curriculum rather than through sets of isolated "exercises".

(d.) Success in developing more complex thinking strategies will depend in part on the child's motivation. He should feel that the problem with which he is faced is related to his interests.

(e.) Since the development of more complex thinking processes involves a number of abilities, it is important to use a wide range of concrete, verbal and other materials in an instructional program. A wide variety of "stimuli" is needed, as is a wide variety of approaches or methods.

(f.) It is difficult to imagine creative, evaluative and other more complex thinking procedures being developed in classrooms that are overly rigid, overly controlled or in general dominated by the teacher. Neither does it appear likely that an atmosphere of fear or threat is suitable for their development.

(g.) As currently measured on the more commonly used tests, intelligence is not necessarily an accurate gauge of a given child's ability to profit from experiences involving a variety of thinking procedures.

3. Learning is facilitated when topics are taught in depth rather than covered in breadth.

The widely publicized fetish of "ground-covering" in social studies courses has been condemned sufficiently, and no extensive discussion of that issue is needed here. Fundamental agreement exists among social scientists and social studies educators that depth is preferable to breadth.[22]

As yet, however, no precise definition for depth exists. Too often in practice, it means either the wholesale amputation of content from a course without regard to significance or the wholesale addition of data of minor importance or both. The junior high school course in American history is a good illustration of these practices. This course in many schools is now called a "depth" course, since it covers American history only to 1876; presumably the senior high course picks up the story at that point and carries it to its dramatic conclusion. All too frequently, the additional time is used to teach the student longer lists of names, dates, and places; the depth concept is perceived in terms of the quantity of data to be learned.

Confining a course to the coverage of prescribed years or topics may have value as such, but depth implies much more than mere amputation or accretion of data. As the curriculum for each year is planned, three criteria should be considered: first, topics considered of most importance must be given priority and topics of lesser importance should be slighted or ignored; second, sufficient time must be allotted for a thorough treatment of important topics; and third, the increased time available should be used to teach toward a wider range of objectives (skill development, critical thinking, and so on) than would otherwise be possible.

4. Attitudinal learning may be facilitated by careful identification of the specific attitude to be developed and by the construction of situations considered advantageous for attitude change.

As the Project paper on values indicates, the school plays a significant role in creating or altering attitudes. The problem for the teacher is to see what things he can do which may affect the attitudes of his students. One writer recently put the problem this way:

> Education and society are in many cases concerned with making learners want things, which, if left to themselves, they would not normally seek, such as interest in good government, intellectual integrity, economic welfare of others, and the like. How does one, in effect, attach plus signs to such aims. . . .

Several factors complicate the attachment of this "plus sign". While attitude formation takes place basically in the same manner as cognitive learning does, subtle factors related to personality make attitude development more perplexing to teachers than the development of understandings or skills. Students will vary greatly in their reactions to classroom stimuli. Teachers have no adequate methods to assess the various degrees of "readiness" for attitude development in a single class.

Although huge problems complicate the development of attitudes, the task is not an impossible one. Teachers interested in changing attitudes should keep in mind several fundamental guidelines.

a. Attitudes may be more readily developed and/or changed in relatively young children. The older the individual in general, the more rigid his attitudes. Moreover, the younger the child, the greater the influence of adult models on the development of attitudes. It seems apparent that the elementary school teacher, usually second in status and influence only to a child's parents, has a crucial role to play in attitude formation.

b. Since the importance of the peer group increases with age, attitude formation in older pupils is more effective when approached through group processes. This involves an emphasis upon discussion; indeed, evidence exists that even undirected class discussion will result in attitude change.[23]

c. Since attitudes are based upon emotions, change is dependent upon an appeal to feelings.[26] The use of dramatic events, case studies, and episodes in which the student is required to put himself in the position of another are effective ways of appealing to emotions.

d. Students will more readily accept attitudinal change when they feel they have had the opportunity to decide for themselves.[27] This suggests that they be provided realistic experiences with questions and situations which they may discuss and that the teacher refrain from trying to influence attitudinal choice overtly.

5. Learning is facilitated when differences among learners are recognized and attempts are made to teach different pupils differently.

One of the early contributions of educational psychology was to establish that people learn in different ways and at different rates. Despite the wide recognition of these facts, easily workable techniques for providing for individual differences have not been developed to a high degree of precision.

Ideally, individual differences should be handled (and exploited) through individual instruction. Some individualized instruction is possible in a typical classroom arrangement, but, generally speaking, the teacher-pupil ratio is such that little can be accomplished in this fashion. The non-graded school in which pupils supposedly can move at their own pace may prove effective,[28] but as yet it is not a wide spread innovation.

Another device considered promising by some educators is the programmed learning-automatic teaching approach. While this approach has proved useful in some school subjects, the programs currently available in social studies subjects are few in number and generally of poor quality.[29] It would seem that wide application of programmed instruction to social studies education will not be made in the near future.

Homogeneous or ability grouping has been used to an increasing degree to allow for individual differences. Research evidence as to the relative merits of homogeneous and heterogeneous grouping is bulky but inconclusive.[30] While homogeneous grouping may be justified for a number of reasons, it is necessary to keep in mind that even among "homogeneous" classes, wide ranges of ability are found in characteristics crucial to learning. No system of grouping, it seems, is alone sufficient in providing for the differences among learners.

The most feasible method of handling these differences is to provide diversified activities and experiences through a unit organization. Although the use of units has become widespread, the function of the unit to provide for individual differences is often ignored. Units prepared by a curriculum project must contain several activities designed to teach each major idea of the unit. Provision for individual differences may always be done imperfectly, but by becoming acquainted with the individual differences present in any classroom and by having access to a diverse group of learning activities, a teacher may at least approximate individualized instruction.

6. Learning is more readily transferred when the learner sees a new situation as essentially similar to a situation with which he is familiar. Teaching method, rather than subject taught, determines what is transferred.

The great quantity of research on transfer of learning over the past several decades has greatly altered previous notions about this important phenomenon. Briefly, current thought among learning psychologists rejects both the gross transfer notions of faculty psychology and the "identical elements" theory in favor of a middle ground.[31] According to these theories, transfer is possible on a fairly broad scale and, moreover, all types of learning outcomes (skills, generalizations, and attitudes) will transfer insofar as the context is taught with transfer in mind.

Current notions about transfer center around the method of presentation. As Cronbach says, "What is...transferred depends upon the teaching method; the same subject taught differently may produce great or little transfer."[32] The single method to be used is defined largely in terms of any technique which will lead to intellectual development, operational thought, understanding, or the attachment of meaning.

Equally significant in teaching for transfer is the arrangement of key ideas and concepts in sequence so that the same idea or concept is met by the student at different times. In his challenging analysis of the learning process, Bruner implies strongly that specific aspects of structure must be introduced early and then re-presented later.[34] Cronbach is more explicit when he discusses the "cumulative" nature of knowledge as learned by the student.[35] In summarizing several ideas related to sequence, he emphasizes that the "curriculum should provide repeated opportunities to deal with the most significant general concepts," and that the key ("operational") concepts have an inherent order which can be determined by the process used by the student as he learns the concepts.[36]

It should be noted that the comments of Bruner and Cronbach are rather broad inferences from a limited amount of research. Nonetheless, the tendency among psychologists to emphasize sequence is strong enough to justify tentative acceptance of the principle for curriculum development.

The implications, then, for a curriculum development project of the research and recommendations regarding transfer are primarily two: first, the teaching methods and emphases discussed earlier in this paper (discovery and thinking processes) should be used as often as possible; and, second, any curriculum ought to contain a sequence of the most significant ideas and concepts in the various disciplines.

The six principles discussed here are neither conclusive nor inclusive. Their main function may well be to suggest factors associated with the learning process which must be considered in planning a curriculum. None of the principles is capable of being stated precisely in the form of immutable "laws"; yet, in total, they can serve as a substitute for the unsophisticated notion or the conventional folklore about learning which so often dominates classroom activities.

FOOTNOTES

1. Jerome Bruner, The Process of Education, Cambridge: Harvard University Press, P. 20.

2. Bruner's illustration of discovery in operation in social studies leaves much to be desired. It is difficult to see how the incident described there (p. 21) could lead to an understanding of an "established relationship" in the field of geography.

3. Although cautionary notes on discovery are made by some reviewers; for example, "Altogether it should be emphasized, however, that the belief in the superiority of discovery...over traditional teaching still rests more on intuitive conviction than on well-established experimental generalizations." Jan Smedslund, "Educational Psychology," in P. R. Farnsworth, ed., Annual Review of Psychology, 1964, Palo Alto: Annual Reviews, Inc., p. 273.

4. For various points of view and discussions of the problems approach see G. L. Fersh, R. E. Gross, and R. H. Muessig, eds., The Problems Approach and the Social Studies, Curriculum Series Number Nine, Washington, D. C.: The National Council for the Social Studies, 1960; Dorothy Fraser and Edith West, Social Studies in Secondary Schools, New York: Ronald Press, 1961, Chapter 13.

5. Maurice P. Hunt and Lawrence E. Metcalf, Teaching High School Social Studies, New York: Harper and Brothers, 1955, Chapters 11-16.

6. Donald W. Oliver, "Educating Citizens for Responsible Individualism," in Citizenship and a Free Society: Education for the Future, Thirtieth Yearbook of the National Council for the Social Studies, Washington, D. C.: The Council, 1960, pp. 201-227.

7. Ibid., p. 221. Oliver and Shaver recently reported the results of broad scale experimentation comparing groups taught by the Socratic method with groups which studied the same material without being pressed to defend a value position. (James P. Shaver and Ronald W. Oliver, "Teaching Students to Analyze Public Controversy: A Curriculum Project Report," Social Education, Vol. 28, No. 4, April, 1964.) No differences

were found between the experimental and control groups. The writers comment that an "explicit conceptual framework i.e., significant problems may well be more important than the particular 'style' used by the teacher."

8. John Dewey, *How We Think*, Boston: D. C. Heath, 1933.

9. James L. Mursell, *Successful Teaching*, New York: McGraw Hill, 1954, Chapter 3. For an excellent discussion of this point, see Ernest Horn, *Methods of Instruction in the Social Studies*, New York: Charles Scribner's Sons, 1937, Chapter IV.

10. Jerome Bruner, Jacqueline J. Goodnow, and George A. Austin, *A Study of Thinking*, New York: Wiley, 1956.

11. Hilda Taba, "Thought Processes and Teaching Strategies in Elementary Social Studies." (Paper presented to the American Education Research Association, Chicago, February 17, 1962.)

12. V. Hazlitt, "Children's Thinking," *British Journal of Psychology*, Vol. 20, 1930, pp. 354-361. See also D. Layton, "An Exploratory Study of Primary Grade Children's Ability to Conceptualize Based Upon Content Drawn from Selected Social Studies Topics," (Unpublished master's thesis, The University of Minnesota, Minneapolis, 1964.)

13. R. Suchman, The Elementary School Training Program in Scientific Inquiry. (Mimeographed, Urbana: University of Illinois, 1962).

14. N. Grener and L. E. Raths, "Thinking in Grade IV," *Educational Research Bulletin*, Ohio State University, Vol. 24, 1945.

15. B. S. Bloom, "Some Results of a Study of Conscious Thought Processes in Classroom Situations," *American Psychologist*, Vol. 6, 1951.

16. G. L. Fahe, "The Questioning Activity of Children," *Journal of Genetic Psychology*, Vol. 60, 1942.

17. C. T. Broun, "An Experimental Diagnosis of Thinking on Controversial Issues," *Speech Monograph*, Vol. 17, 1950.

18. Benjamin S. Bloom and Lois J. Broder, *Problem Solving Processes of College Students*, Supplementary Educational Monographs, No. 73, Chicago: University of Chicago Press, 1950.

19. See, for instance, C. H. Boeck, "Teaching Chemistry for Scientific Method and Attitude Development," *Journal of Experimental Education*, Vol. 19, 1951, pp. 274-253; C. V. Higgins, "The Educability of Adolescents in Inductive Ability," *Science Education*, Vol. 22, 1945, pp. 82-85;

Arno Jewett, "Detecting and Analyzing Propaganda," English Journal, Vol. 29, 1940, pp. 104-115.

20. J. M. Deutsche, "The Development of Children's Concepts of Causal Relations," The University of Minnesota Institute of Child Welfare Monograph, No. 13, 1937.

21. M. B. McAndrew, "An Experimental Investigation of Young Children's Ideas of Causality," Studies of Psychology and Psychiatry: Catholic University of America, Vol. 6, 1943, No. 2.

22. Paul Torrance, "Current Research in the Nature of Creative Talent," Journal of Counseling Psychology, Vol. 6, 1959, pp. 309-316.

23. For a review of related literature and description of a teaching experiment, see Fred Johnson, "Depth Versus Breadth in Teaching American History to High School Students," Unpublished Ph.D. Dissertation, University of Minnesota, 1961. Typical of opinion on the depth-breadth question is Joseph R. Strayer, "History," in The Social Studies and the Social Sciences, New York: Harcourt, Brace, and World, Inc., 1962.

24. George W. Hartman, "Interests, Attitudes and Ideals," in Charles W. Skinner, editor, Educational Psychology, Vol. 49, 1958, pp. 224-228.

25. K. Nutte and J. B. Biggs, "Attitude Change Through Undirected Group Discussion," Journal of Educational Psychology, Vol. 49, 1958, pp. 224-228.

26. Glenn M. Blair, R. Stewart Jones, and Ray H. Simpson, Educational Psychology, Second edition, New York: Macmillan, 1962, Chapter 8.

27. Ibid.; see also Chester W. Harris, ed., Encyclopedia of Educational Research, New York: Macmillan, 1960, pp. 102-112.

28. John I. Goodlad and Robert H. Anderson, The Non-Graded Elementary School, Rev. ed., New York: Harcourt, Brace, and World, 1963.

29. See, for example, the programs for social studies listed in Programs '63. Washington D. C.: U.S. Government Printing Office, 1963, pp. 702-742.

30. See Harris, op. cit., pp. 221-225.

31. Robert F. Grose and Robert C. Birney, eds., Transfer of Learning, Princeton: D. VanNostrand Co., Inc., 1963, (Paperback); Lee S. Cronbach, Educational Psychology, Second edition, New York: Harcourt, Brace, 1963, Chapters 10 and 11; Blair, Jones, and Simpson, op. cit., Chapters 9 and 10; J. Bruner, Process of Education.

32. Cronbach, op. cit., p. 346.

33. Ibid., Chapter 10.

34. Bruner, Process of Education, pp. 26-27.

35. Cronbach, op. cit., pp. 340-341.

36. Ibid., p. 341.